THE IBIS.

TENTH SERIES.

Vol. V. No. 2. APRIL 1917.

X.—The Birds of Yemen, south-western Arabia, with an account of his journey thither by the collector, Mr. G. Wyman Bury. By W. L. Sclater, M.A., M.B.O.U.

(Plates III. & IV., and Text-figure 1.)

Introduction.

THE former Turkish Province of Yemen in south-western Arabia has been seldom visited by European travellers, and it was a piece of good fortune that enabled the British Museum to obtain the services of Mr. Bury to travel into the interior of the province in 1913 to make zoological collections.

Mr. Bury spent a year in the country and made two journeys inland. During the first of these he penetrated as far as Menakha, which lies at an elevation of 7500 feet, and where he spent half the month of December 1912 and the whole of January 1913. On the second journey he reached Sanaa, the chief town of the province, some way beyond Menakha, and here he spent parts of the months of August and September 1913.

The collections of birds sent home by Mr. Bury consisted of upwards of 400 skins; a portion of the e were destined

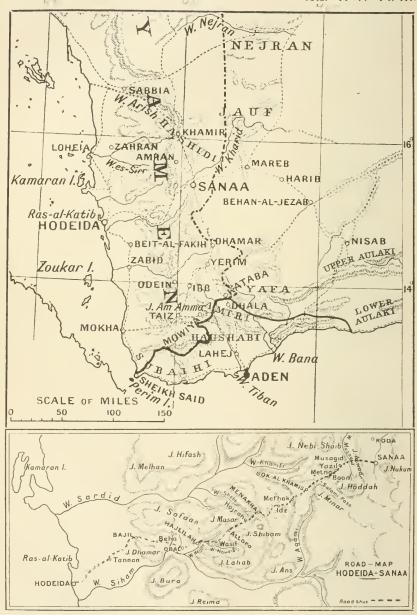
for the Tring Museum; they are referable to 100 species. Among them the following are novelties, and have already been described by Mr. Ogilvie-Grant in the Bulletin of the British Ornithologists' Club:—Rhynchostruthus p. yemenensis, Paliospiza yemenensis, Pseudacanthis yemenensis, Turdus menachensis, Accentor fayani, Enanthe yemenensis, Parisoma buryi, and Cryptolopha u. yemenensis.

In addition to these eight new forms the following twenty-seven have never previously been taken in southern Arabia; at any rate, they do not appear in the list compiled by Mr. Ogilvie-Grant in 1900:—Cinnyricinclus verreauxi, Petronia dentata. Emberiza hortulana, Emberiza e. seminovi, Anthus r. cinnamomeus, A. l. captus, Lanius minor, Phoneus niloticus, Acrocephalus palustris, Sylvia e. icterops, S. carruca, Phylloscopus e. abietinus, Monticola rufocinerea, Phynicurus p. pluenicurus, Luscinia luscinia, Cercotrichas podobe, Irania ynturalis, Saxicola r. maura, Alseonax yambayæ, Riparia rupestris, Hirundo rufula, Merops apiaster, Gypaëtus b. grandis, Hieraaëtus fasciatus, Gallinago media, Phalaropus lobutus, Numida p. ptilorhyncha.

Shows a much stronger affinity to that of the Ethiopian region than to that of the Palæarctic region. Most of the typical Palæarctic forms are migrants which would naturally pass through Arabia on their journey south. One remarkable exception is the Lammergeyer, which appears to belong to the widely ranging race of southern Europe and Asia rather than to the Abyssinian form, to which it is certainly nearest in point of distance.

Mr. Bury has published an account of his travels in Yemen in a more popular form *, and we would recommend all who are interested in the subject to obtain this work. A few notes on the birds, to which a chapter is devoted, have been borrowed to make the present account more complete, and these with Mr. Bury's field-notes are placed in inverted

^{* &#}x27;Arabia Infelix, or the Turks in Yamen,' by G. Wyman Bury, pp. x+213, Illustr. & Maps. London (Macmillan) 1915. 8vo.



MENPES PRESS WATFORD.

MAP OF SOUTH-WEST ARABIA.
ROUTE-MAP HODEIDA-SANAA.

commas in the list of species. Finally, we are indebted to the publishers, Messrs. Macmillan & Co., for permission to copy two of the maps in that work which show the route traversed and the general situation of Yemen (Plate III).

Note on the History of Arabian Ornithology.

The earliest zoological explorer of Yemen was Pehr Forskål (1736-1763), a young Danish naturalist, and a pupil of Linnæus. He accompanied the celebrated traveller Carsten Niebuhr on his expedition to the east in 1761. After visiting Egypt they sailed down the Red Sea to Jiddah and Loheia, whence they travelled inland to various places in the interior of Yemen. Forskål unfortunately died at Yerim, on the road from Mokha to Sanaa, in 1763. After his return to Europe, Niebuhr edited his young companion's manuscript account of his collections. These consisted largely of plants and insects, but three birds from Yemen are included as well as others from other countries—the Bee-eater, the Hornbill, and the Kingfisher, examples of all of which are contained in Bury's collection.

The next naturalists to visit these regions were two young Germans, F. W. Hemprich and C. G. Ehrenberg. They did not apparently penetrate into the interior of Arabia, but visited the coast ports. Hemprich, like Forskål, sacrificed his life to his enthusiasm. He fell ill at Jiddah, and died in 1825 at Massowah, on the African coast of the Red Sea. In this case also the survivor, Ehrenberg, edited his companion's manuscripts under the title of 'Symbolæ Physicæ,' the portion dealing with the birds being published between 1828 and 1833. Ehrenberg also published an incomplete account of his travels under the title 'Naturgeschichtliche Reisen durch Nord-Afrika und West-Asien' (Berlin, 1828).

Rüppell, well-known for his travels in north-east Africa, also visited Arabia Petræa and some of the towns along the Red Sea coast, including Jiddah, where he apparently did some collecting, as some of his types came from there. He does not seem, however, to have penetrated into the

interior to any extent. He also published an account of his travels, 'Reisen in Nubien, Kordofan und peträischen Arabien' (Frankfurt-a.-M. 1829), in addition to his wellknown zoological works.

Turning now to Aden and its hinterland, we find that Col. J. W. Yerbury, M.B.O.U., was the first to publish an account of the birds of Aden. This appeared in 'The Ibis' for 1886, and 76 species were mentioned, but only a small proportion of these were authoritatively identified by Dr. Bowdler Sharpe. Further lists of Aden birds have been made by Lieut. H. E. Barnes, Mr. R. Hawker, and by Col. Yerbury himself, all of which appeared in 'The Ibis.' In 1900 Mr. Ogilvic-Grant published a paper on the birds collected by Mr. A. Blayney Percival and Mr. W. Dodson in the hinterland of Aden. The expedition was proposed to the authorities of the Natural History Museum by General O'Moore Creagh, V.C., the Governor of Aden at that time, and the necessary funds were supplied partly by the Royal Society and partly by the Hon. Walter (now Lord) Rothschild. Considerable collections were made in the Haushabi country north of Lahej, and in the Abian country to the east of Aden. Mr. Ogilvie-Grant, by incorporating the results of Col. Yerbury's and Messrs. Barnes and Hawker's previous work, was able to give a list of 193 birds, forty-seven of which were previously not known from Arabia.

Mr. Pereival was assisted by Mr. G. W. Bury, whom he met at Aden at this time, and the latter subsequently sent a valuable collection of birds, collected chiefly in the Amiri district, to the Museum; these unfortunately have never been listed, but notice of several of the species in this collection will be found in the present paper.

Mr. Bury also made some further collections when attached to an Austrian Expedition which visited southern Arabia for archeological investigations. An account of this collection was published by Drs. von Lorenz and Hellmayr, who found a number of new species among them. Since that date but little work has been done in Arabian ornithology.

A list of the various publications to which I have alluded follows, and these are quoted in the list of species with the name of the author and date only.

To Mr. Ogilvic-Grant I would here like to express my acknowledgments and warmest thanks for so kindly permitting me to describe this very interesting collection.

List of Literature.

- 1775. Forskål, P.—Descriptiones Animalium, Avium etc., post mortem auctoris edidit Carsten Niebuhr. Hauniæ, 1775. 4to.
- 1828-33. EHRENBERG, C. G.—Symbolæ Physicæ seu Icones et Descriptiones Avium, etc., etc. Berlin. 4to.
- 1835-40. RÜPPELL.—Neue Wirbelthiere zu der Fauna von Abyssinien gehorig. Frankfurt-a.-M. 4to.
- 1851. NICHOLSON.—Note on a new species of Francolin. Proc. Zool. Soc. 1851, p. 128, pl. xl.
- 1886. Yerbury, J. W.—On the birds of Aden and the neighbourhood.

 With notes by R. Bowdler Sharpe. Ibis, 1886, pp. 11-24,
 map.
- 1893. Barnes, H. E.—On the birds of Aden. Ibis, 1893, pp. 57-84, 165-181.
- 1893. Matschie, P.—[Seven birds from Aden collected by O. Neumann.] Journ. Ornith, 1893, p. 112.
- 1893. Barnes, H. E.—A list of the birds of Aden. J. Bombay N. II. Soc. viii. pp. 231-233.
- 1896. YERBURY, J. W.—Further notes on the birds of Aden. Ibis, 1896, pp. 13-41, pl. i.
- 1898. HAWKER, R.—List of a small collection of birds made in the vicinity of Lahej, in southern Arabia. Ibis, 1898, pp. 374-376.
- 1900. OGILVIE-GRANT, W. R.—On the birds of southern Arabia, with field-notes by A. Blayney Percival. Novit. Zool. vii. 1900, pp. 243-266, 591. Further additions, id. ibid. viii. 1901, p. 54.
- 1901. LORENZ, L. v. und HELLMAYR, C. E.—Ein Beitrag zur Ornis
 Süd-Arabiens. J. f. O. xlix. 1901, pp. 230-245; also Denkschr.
 K. Akad. Wiss. Wien, lxxi. 1907, pp. 103-121, 1 pl.
- 1901 A. OGILVIE-GRANT, W. R.—Letter on Lorenz & Hellmayr's new species from southern Arabia. Ibis, 1901, pp. 518-521.
- 1902. OGILVIE-GRANT, W. R.—Description of Serinus rothschildi and Scotocerca buryi from southern Arabia. Bull. B. O. C. xiii. pp. 21–22.
- 1904. NEUMANN,O.—Drei neue Formen aus Süd-Arabien. Orn. Monatsb. xii. 1904, pp. 29-31 [Cinnyris, Argya, Turtur].
- 1913. OGILVIE-GRANT, W. R.—Description of new birds from Yemen. Bull. B. O. C. xxxi. pp. 86-91, 112, and xxxiii. 1914, p. 91.

Account of the journey by G. WYMAN BURY.

I landed at Hodeida on 30 November, 1912, with Ottoman credentials to the Governor of that port, who also controls the districts of Bura and Reima. It may be noted here that a passport is essential, but is of no use whatever as an introduction to the interior. The Province of Asir, i. e. the whole of northern Yamen, was closed against all but natives, and the southern coastal districts were in a state of revolt, even native traffic being suspended.

The Governor offered me the choice of Bura, Reima, or Menakha. I chose the last as being furthest inland, highest, and on some sort of a road.

I left Hodeida early in December with mule-transport, and struck eastwards across the Tihama or maritime plain in the cool of the day, halting for a few hours at Tannan. This is an Ottoman post and caravanserai for travellers some fifteen miles from Hodeida; a useful half-way house on this long stage.

The next halt was at Bajil, a small town between the foothills of the maritime range, thirty-two miles from Hodeida and about 600 feet above sea-level. The intervening country is chiefly desert: sand and low scrub, with occasional belts of bush and sparse mimosa. The ground rises gently to loamy uplands and cultivation, as Bajil is approached. Here there is a fair amount of tall bush, among which I saw the yellow Sparrow, Passer euchlorus, in numbers, the only place where I found it in Yamen.

Alamon desertorum occurs on this maritime plain, and Pyrrhulauda melanocephala may be seen frequently outside Hodeida.

Beyond Bajil there is no more desert, but broad, open plains intersected by foot-hills and moderately fertile. Hornbills were first encountered among the sparse mimosa of Bajil plain.

The foot-hills close in towards Hajeilah, and the country gets more fertile and better wooded.

Away to the right of the road is the tall isolated massif

of Mount Bura, about 5000 feet above sea-level. This district is well wooded and—politically speaking—fairly quiet, but the only feasible routes pass through disturbed areas, and were definitely closed during and after the summer of 1913; coffee comes down at irregular intervals from there to Hodeida by favour of the local freebooters. The Sheikh of Bura is a highly respectable and affable old man. Any European who can get to the top of Mount Bura with proper introductions would probably be well received. It has already been visited by European sportsmen.

Far to the south of Bura may be seen the long razor-backed ridge of Reima. This range has been the scene of much discontent and turbulence for the last year or so. The disturbance is due to taxation and may become chronic. "Pheasants" are said to occur on Reima, but the local word "akyal" is so loosely applied to any long-tailed bird of bright plumage that their quest is uncertain.

Hajeilah is a small township about 30 miles from Bajil, and 2080 feet above sea-level. The district is agricultural, and there are groves of tall timber between the adjacent foot-hills. There, Guinea-fowl and most of the bird-life of the neighbourhood are to be found. Reckless and unchecked wood-cutting is gradually destroying natural cover, as in other parts of Yamen.

The crops in the Hejjan valley are useful beats for small birds, but the Hajeilah population is churlish to strangers, though apt to improve on acquaintance.

The Hajeilah "grouse" occurs rarely and only on the stony slopes of the foot-hills. Here Guinea-fowl and Chikore may be heard calling simultaneously, the former from some fold of the foot-hills and the latter from the heights running up towards Menakha ridge.

The long-tailed Coracias abyssinus occurs frequently in this district, but no higher, and this is also the highest limit of the Hornbills.

The road up from Hajeilah lies along the stony gorge of the Hejjan, and, among its bushes, the Paradise Flycatcher ranges to its lowest limit; this bird is unknown at Hajeilah, and is never seen at Menakha or Wasil.

The half-ruined caravanserai of Wasil (a small village perched on a spur of the main heights at 4200 feet) is a convenient halting-place on the long climb up to Menakha. It is reached by a steep zig-zag up from the gorge of the Hejjan about four hours from Hajeilah. The traveller should time his journey so as to be out of this gorge before the morning sun strikes into it. This involves a start from Hajeilah at not later than 3 A.M. in summer.

Menakha is six hours from Wasil up a winding mountainroad—a fortress-town of some 8000 inhabitants, at an elevation of 7500 feet. The town itself is built along a spur of Mount Shibam (the culminating point of this massif).

Menakha, in the winter months, is beset by mountain mists most afternoons. These mists drive up from below and hang about till late at night and, sometimes, all next day. They are thick and damp, and do much to keep the coffee flourishing during the winter drought. The terrain consists of deep ravines and soaring heights that seem to overhang the town. The neighbourhood is badly wooded and there is little natural cover, though many birds take refuge between the stones that form field-terraces (a common feature of the landscape). Coffee gives good cover, though difficult to work; it does not flourish above 7000 feet or below 4000 feet. Walnut and almond groves occur in sheltered ravines. Apricot and plum orchards grow up to 8000 feet, and attract numbers of Pseudacanthis yemenensis, which I first met here. This bird seems to be very local; I only saw it at Menakha and Sok-al-Khamis and, as a eagebird, at Sanaa: I estimate its vertical range at 7000-8000 feet. All bird-life is scarce at 9000 feet in the winter. Near the summit of Shibam I only saw an occasional Chat or Ground-lark; both are very common round Menakha.

Even the big birds of prey seemed to prefer precipiees at mid-altitude, and spent the night on sheltered ledges. Any carcase would draw vultures—Gyps, Neophron, and Vultur monachus. I often noted Lämmergeyer here soaring over

the slaughter-ground outside the town, on the look-out for a bone. They seemed afraid of the larger vultures, and were very wary and difficult to approach. This bird ranges down to Wasil, but I have never seen it on the inland or eastern slopes of the Shibam massif, nor does it occur among the foot-hills that lie beyond and below Menakha towards the main range that forms the scarp of the central Yamen plateau. Yet I met it again at Sok-al-Khamis high up on this scarp, but lost it again after crossing the main range, and it never occurs on Sanaa plain. I have never seen it in any part of the Aden Hinterland. I spent two months at Menakha, and left in mid-February for Wasil.

Here, the terrain is composed of a series of giant spurs and deep, precipitous ravines, which drain steeply down from the heights of Menakha into the Hejjan valley.

Wasil is much better wooded than Menakha. It was here and here only that I encountered Rhyncostruthus percivali yemenensis, invariably feeding on the sessile fruit of the "amk" (a four-angled, short-spined, euphorbiaceous bush). I noticed this same habit on the Dthala plateau (towards Kataba) in 1902 and, in 1900, in the Yeshbum valley, where I collected the type of the species. The bird seems to be of rare occurrence and difficult to approach, except when actually feeding. I never saw it except when the "amk" was in fruit (late winter). Passing up the road again in June, I saw nothing of it, though I kept a sharp look-out.

I left Wasil early in March for Hajeilah, where I stayed till the end of April. Here I secured types of all birds I saw (barring obviously familiar species as crows and vultures), except a small black eagle that roosts in tall trees.

I occasionally heard an Œdicnemus at night whistling across the mud-flats of the Hejjan after a spate had come down from the hills. I returned to Hodeida in May.

By now the political aspect was getting serious, even near Hodeida. Bura was isolated and Reima in revolt. I was refused both districts politely but firmly, so took advantage of the Vali's return up-country after a special mission to ask for Sok-al-Khamis to be followed by a visit to Sanaa. I knew by then that the chances were against me or any other European being allowed to roam about the country, so meant to get as far in as I could.

I left Hodeida again for the interior on June 19. My journey up to Menakha need not be described again, except to note that, at Hajeilah, the erstwhile barren fallow was under heavy crops of millet and maize, while vegetation generally throughout the district was lush and dense, owing to the spring spates down the Hejjan and torrential thunderstorms *.

Beyond Menakha the terrain drops steeply down some 3000 feet to an extensive and intricate system of foot-hills and small kopjes, beyond which, eastwards, some 30 miles as the crow flies, rises the long wall-like ridge formed by the ranges of the central Yamen plateau.

On the western scarp of this system at an elevation of 7300 feet, is the village and post of Sok-al-Khamis. Here I collected several Lammergeyers, but did little with birds generally. The country is very barren and storm-swept; crops are scanty and natural cover searce. The district is much over-shot by Turkish officers and men.

I reached Sanaa on Aug. 20, and though my visit had received the written sanction of the Vali, I was made the victim of a good deal of petty persecution by the city police. This is not unusual in the case of Europeans, especially British, who have stayed at Sanaa for any length of time without employment that Ottoman officialdom could understand.

I came to close quarters with the Vali, and was eventually allowed to stop until I had worked out the district, an escort and freedom of movement being granted.

The official attitude, though annoying, was not unnatural. The interior of Yamen (south of Asir) is practically in the

^{*} Hajeilah and Wasil get their rains in April and May; Menakha from April to July intermittently but plentiful. Sok-al-Khamis and Sanaa districts get their rainy season in July and August. The Tihama has only a few occasional showers in spring.

hands of the Imam by now, except in such districts as repudiate him and the Turks.

Both sides are suspicious of aliens and of each other, while my pursuits required a freedom of movement which was a constant source of anxiety to a Government that had to practise a conciliatory tribal policy. I soon saw that there was no chance of extending my expedition southwards along the inland plateau, and had long known that north and east were alike out of the question.

I therefore finished off the Sanaa district and returned to the coast, working the vicinity of Hodeida just before leaving in October 1913.

The present political situation in Yamen convinces me that it will be long before another naturalist is allowed to work a'field in the interior, and the coastal districts are now closed.

One other journey should be possible, viz., Hodeida to Mokha by dhow, and thence via Taiz up on to the inland plateau towards Ibb, Yerim, and Dhamar. This plateau culminates towards Yerim, in which district the Tiban and Bana rise to flow southwards to the sea in the Aden Protectorate. Yerim is 8860 feet above sea-level.

There yet remains Asir. This province cannot be worked with Ottoman credentials, yet it must be borne in mind that there is a Turkish maritime blockade of the Asiri coast.

In Asir the central plateau appears to break up into numerous ranges and isolated massifs, and desert tracts are more frequent inland. In such districts I should expect to find the Arabian Ostrich, as also in the desert north and east of Mareb. I know it occurs in Jauf.

The difficulty in penetrating any of the above-named regions is that the Turks will not let you try, and to temporarily evade officialdom is merely to run up against some semi-detached chieftain who would hand you back to the powers that be in order to curry favour while not omitting to "bleed" you first. The practical naturalist cannot tour in disguise under such conditions; his pursuits and impedimenta betray him to the sophisticated mind.

Yamen is not fanatical, it is this dual control that constitutes the real difficulty.

Unceasing vigilance and tact is, of course, required of anyone working among Moslem tribes until he can win their confidence and esteem, but to have to deal with the constant suspicion and intrigues of two antagonistic administrations calls for diplomacy as well, and may, at any moment, render further research impossible for reasons beyond the investigator's control.

List of localities at which collections were made.

Menakha, 7500 ft., from 18 Dec. 1912 to 1 Feb. 1913. Wasil, 4200 ft., ,, 18 Feb. 1913 ,, 6 Meh. 1913. Hajeilah, 2080 ft., ,, 10 Meh. 1913 ,, 17 Apl. 1913. Sok-al-Khamis, 7300 ft., ,, 11 July 1913 ,, 15 Aug. 1913. Sanaa, 7600 ft., ,, 20 Aug. 1913 ,, 19 Sept. 1913. Hodeida, sca-level, ,, 6 Oct. 1913 ,, 13 Oct. 1913.

List of Species.

Cinnyricinclus leucogaster.

Turdus leucogaster Gmelin, Syst. Nat. i. 1789, p. 819: Whydah, West Africa.

a-c. $\beta \circ [\circ]$. Hajeilah, 2080 ft. 2-17.iv. 13.

"Another dashing denizen of tall timber is the Glossy Starling, with his roving yellow-ringed eye, his plumcoloured suit, and his smart white waistcoat."

This Starling has not previously been recorded from southern Arabia, but there are five examples obtained on a former occasion by Mr. Bury in the Aden Protectorate, viz.:—2 &, El Kubar, Amiri dist., 2 & 5. v.; \(\varphi\), Azraki ravine, 13. v.; \(\varphi\), El Haut, 16. v.; and \(\varphi\), Ichaf, Amiri dist., 4. x. It is doubtless a resident.

It has a wide distribution from southern Arabia to western Africa and south to Nandi in British East Africa.

Hagiopsar tristrami hadramauticus.

Pilorhinus hadramauticus Lorenz u. Hellmayr, Orn. Monatsb. ix. 1901, p. 30; Yeshbum, S. Arabia. Lorenz & Hellmayr, 1901, p. 231, 1907, p. 104; O.-Grant, 1901, p. 54; id. Ibis, 1901, p. 518.

a-d. 2 ♂, 2 ♀. Menakha, 7000-7500 ft. 1. i.-1. ii. 13. e. ♀. Wasil, 4000 ft. 28. ii. 13.

The Red-winged Spreuw of southern Arabia is very close to that of Palestine, and is certainly not more than subspecifically distinct. In size and general coloration the two cannot be distinguished, but the rufous of the primaries is distinctly darker in the Arabian bird, and, as a rule though not constantly, the primary-coverts of the Palestine form are dusky and rufous while those of the Arabian form are entirely black.

There is a good series of each of the forms in the British Museum in addition to those listed above, which seem to show that they are not migratory from Palestine to south Arabia as supposed by Mr. O.-Grant, viz.:—

- H. t. tristrami.—Jericho and Ain Fishkhat, January.(Tristram); Petra, April; and S.E. of Dead Sea,May (Carruthers).
- H. t. hadramauticus.—Yeshbum, December (Percival); Amiri dist., January, February, March; and Yemen, January, February (Bury).

Ploceus (Xanthophilus) galbula.

Ploceus galbula Rüppell, N. Wirbelth. 1835, p. 92, pl. 32. fig. 2: Modat valley, Abyssinian coast.

Yerbury, 86, p. 18, 96, p. 27; Barnes, 93, p. 80; O.-Grant, 1900, p. 246; Lorenz & Hellmayr, 1901, p. 232. a, b. 3, 3 imm. Wasil, 4000 ft. 26-28.ii.13.

· c, d. ♂?, ♀. Hajeilah, 2080 ft. 11–13. iii. 13.

e, f. 3, 3 imm. Sok-al-Khamis, 7000 ft. 11. vii. 13.

This Weaver, also found throughout the Egyptian Soudan, Abyssinia and Somaliland, is a common bird in southern Arabia. Barnes found it nesting throughout the year at Aden and gives a good account of its breeding-habits.

I find a considerable amount of variation in the distribution of the chestnut-red of the face and also in the depth of the colour, which sometimes is almost black, but I can see no eonstant distinction between the African and Arabian birds. There is a good series in the British Museum from Aden and the neighbourhood as well as from north-eastern Africa.

Estrilda rufibarba.

Habropyga rufibarba Cabanis, Mus. Hein. 1851, p. 169: Arabia.

Yerbury, 86, p. 18, 96, p. 27; Shelley, Ibis, 1886, p. 334; Barnes, 93, p. 82; O.-Grant, 1900, p. 245.

a, b. ♂♀. Menakha, 7000 ft. 28. xii. 12. c-f. 2♂, 2♀. Wasil, 4000 ft. 27. ii.; 3. iii. 13. g.♀. Sok-al-Khamis, 7000 ft. 11. vii. 13.

"Iris dull dark brown, bill black with a line of red along the lower edge of the upper jaw, feet blackish; length of male in flesh 10.5. Crops full of grass seeds."

A note on the example "c," dated 27 Febr., states: "an influx of these little finches occurred to-day from below working up hill through the coffee."

There seems to be no appreciable difference in the sexes. Five other examples in the British Museum are as follows:—2 Lahej, i.88 (Yerbury); 1 Aden (Chevalier); 2 El Kubar, Amiri distr., 11. vii. (Bury).

Rhynchostruthus percivali yemenensis.

Rhynchostruthus percivali yemenensis O.-Grant, Bull. B. O. C. xxxi, 1913, p. 112: Yemen.

a, b. \Diamond \Diamond . Wasil, 4000 ft. 3. iii. & 25. ii. 13. [Types of the subspecies.]

A note on the ticket states that the male was feeding on eactus and the erop was full of the seeds. The stomach of the female also contained small seeds.

This Grosbeak is closely allied to R. percivali, also described by Mr. O.-Grant from southern Arabia. It differs in having a more restricted black patch on the face and chin which does not extend on to the frontal region as in R. percivali. Of this latter form there are now four examples in the British Museum, all obtained by Mr. Bury, as follows:—Yeshbum, Hadramut, 17. i. 00 (Type); 3, El Kubar, Amiri dist., 14. xii.; 3 ? Ichaf, Amiri dist., 7. i.

Petronia dentata.

Xanthodira dentata Sundevall, Œfv. Ak. Förh. 1850, p. 127: N.E. Africa.

a-e. 4 ♂, 1 o. Hajeilah, 2080 ft. 10.iii. to 4.iv. 13.

One male (collected March 10) has the crown greyish-brown, bordered by a rufous eyebrow which merges into the rufous-brown back. The yellow breast-spot is faint and ill-developed. In this bird the "iris is pale brown, the bill (both mandibles) is black, and the legs blackish." The other three males have the lower mandible quite pale with only the tip black, while the crown and back are dull brown and the eyebrow is buffy white. They are very different-looking birds to the one first described, which is apparently a young bird or one not in breeding-plumage.

Of this species, though not previously recorded from Arabia, there is a good series of nine males in the British Museum, obtained in various localities in the Amiri district of southern Arabia by Mr. Bury in 1902, between August and November. The same two types are in this series as in the one from Yemen. The females, of which there are five in the Amiri series, all resemble the non-breeding or young males.

The range of this Rock-Sparrow extends across north-east Africa from Abyssinia and the Anglo-Egyptian Soudan to the Gambia and Portuguese Guinea.

Passer domesticus buryi.

Passer domesticus buryi Lorenz u. Hellmayr, Journ. Ornith. 1901, p. 233: Yeshbum, S. Arabia.

Yerbury, 86, p. 182, 96, p. 28; Barnes, 93, p. 83; Hawker, 98, p. 375; O.-Grant, 1900, p. 246; id. Ibis, 1901, p. 520; Lorenz & Hellmayr, 1901, p. 233, 1907, p. 106.

a-g. 4 δ , 3 \circ . Menakha, 7000–7500 ft. 23. xii. 12 to 21. i. 13.

h-j. 2 δ , 1 \circ . Hajeilah, 2080 ft. 19. iii. 13. k-n. 2 δ , 1 δ imm., 1 \circ . Sanaa, 7600 ft. 3–17. ix. 13.

The form of the Sparrow found in southern Arabia seems very close to the Indian subspecies (P. d. indicus), from

which it differs in the absence, as a rule, of the chestnut behind the eye and across the nape; the general colour is also paler, and the crown has a wash of pale brown over the ashy grey. It is a common bird in the Aden Protectorate.

Poliospiza menachensis.

Poliospiza menachensis O.-Grant, Bull. B. O. C. xxxi. 1913, p. 90: Yemen.

 a, b, β \circ . Menakha, 7000 ft. 31 & 20. i. 13. [Types of the species.]

c-h. 5 ♂ , 1 ♀ . Menakha, 6000–7500 ft. 21. xii. 12 to 31. i. 13.

i. 9. Wasil, 4000 ft. 27. ii. 13.

k, l. 3 2. Sanaa, 7600 ft. 8 & 10. ix. 13.

This Seed-eater, judging from the number procured, must be fairly abundant in the highlands of Yemen. Its nearest ally, as Mr. O.-Grant has pointed out, is *P. reichardi* of eastern and north-eastern Africa, from which, however, it can be at once distinguished by its smaller bill and by the absence of the white eyebrow.

Serinus uropygialis.

Carpodacus uropygialis Heuglin, Orn. N.-O. Afr. i. 1871, p. 642: Qonfuda or Kunfuda, Arabia.

Serinus rothschildi O.-Grant, Bull. B. O. C. xiii. 1902, p. 21: Haushabi dist., S. Arabia.

Lorenz & Hellmayr, 1901, p. 234, 1907. p. 108.

u-e. 2 ♂, 3 ♀. Menakha, 7000 ft. 28. xii. 12 to 15. i. 13.

f, g. ♂ ♀. Wasil, 4000 ft. 26-27. ii. 13.

Reichenow and Lorenz & Hellmayr identify this species with Carpodacus uropygialis, obtained by Hemprich and Ehrenberg from Kunfuda, a port on the Red Sea between Jiddah and Hodeida, and there seems to be little doubt that their decision is correct.

The types of Mr. O.-Grant's S. rothschildi were obtained by Mr. Bury on the borders of the Aden Protectorate and Yemen.



Fig. 1. PSEUDACANTHIS YEMENENSIS.

Fig. 2. ACCENTOR FAGANI.

Pseudacanthis yemenensis. (Plate IV. fig. 1.)

Pseudacanthis yemenensis O.-Grant, Bull. B. O. C. xxxi. 1913, p. 89: Menakha, Yemen.

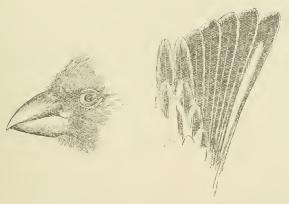
a, b. ♂♀. Menakha, 7000-8500 ft. 16.i.13 & 30.xii.12. [Types.]

c-g. 3 ♂, 2 ♀. Menakha, 7000-8500 ft. 23. xii. 12 to 31. i. 13.

h. Juv.? Sok-al-Khamis, 7000 ft. 23. vii. 13.

"This little bird is often met with among the orehard terraces of Menakha, pouring out its soul in song. It looks like a sparrow and sings like a skylark. It is much in

Text-figure 1.



Side of the head and tail from above of Pseudacanthis yemenensis.

demand at Sanaa as a cage-bird; though fairly common in the district it favours, it is not widely distributed. Its vertical range is from 7000 to 8000 ft."

For this Finch Mr. Ogilvic-Grant found it necessary to make a new genus, the principal characters of which are as follows:—Bill short but rounded and swollen as in Serinus, the lower mandible deeper than the upper; the cutting-edge of the upper mandible is not straight as in Serinus, but strongly decurved as in Alario. The nostrils are concealed by overlanging plumes. The outer (ninth) primary of the wing is distinctly shorter than the 6th, 7th, and 8th, but

longer than the 7th. In this respect *Pseudacanthis* differs from *Serinus*, *Alario*, and *Linaria*. The legs and feet are delicate and slender.

The plumage-characters are also very distinct from most of the other Finches. The inner primary quills from the 1st to the 6th have a basal patch of white, and the outer tail-feathers have a conspicuous band of white running along the inner web nearly to the tip; the pair next the outer ones have the white on the shafts only.

Altogether this little Finch, which appears to be confined to the mountains of the Yemen, presents very distinct characters, as is shown by the coloured plate (IV.) and the cut of the head and tail.

The example collected at Sok-al-Khamis in July is, in my opinion, a young bird and is very different at first sight from the adult. The following is a description:—Above earthy-brown with darker centres to the feathers, giving a streaked appearance throughout, including the crown and the nape; wings and tail as in the adult, but the white patches slightly reduced. Below whitish slightly washed with brown, streaked with dark brown. In general appearance not unlike *Poliospiza menachensis*, but at once distinguished by the white on the wings and tail.

Emberiza hortulana.

Emberiza hortulana Linnæns, Syst. Nat. 1758, p. 177: Sweden.

a-c. 2 \eth , 1 \circ . Menakha, 7000–7500 ft. 31. xii. 12 to 6, i. 13.

The Ortolan is found throughout Europe and western Asia as far as Mongolia and the confines of India. In winter it goes south to Abyssinia, but has not hitherto been recorded from Arabia so far as I am aware.

Emberiza cinerea semenowi.

Emberiza (Hypocentor) semenowi Sarudny, Ornith. Jahrb. xv. 1904, p. 217: Arabistan, Persia.

Emberiza citriniventris P. L. Sclater, Bull. B. O. C. xvi.

1905, p. 39; id. Ibis, 1906, p. 313, pl. xv.: Kuryatein, Syrian desert.

a. d. Menakha, 7000 ft. 26. xii. 12.

b. d. Wasil, 4000 ft. 6. iii. 13.

This rare Bunting has only been known of recent years. The types were obtained in February and March in Arabistan in southern Persia, and the type of *E. citriniventris* by Mr. Carruthers in April. In addition there are two examples in the British Museum collected at Bushire in April by Messrs. Palmer and Cummings respectively, and one also obtained in April at Mal Amir in western Persia by Mr. Woosnam.

The two Bushire examples are both sexed female, and they differ from the other four examples in the British Museum (sexed male) in having the crown streaked like the back and hardly showing any of the greenish wash so noticeable in the males, while below the throat and chest also show distinct traces of streaks, absent in the case of the males.

Fringillaria striolata.

Fringilla striolata Lichtenstein, Verz. Doubl. 1823, p. 24: Ambukol, Soudan.

O.-Grant, 1900, p. 247.

a. d. Menakha, 7000 ft. 18. i. 13.

A single example of the Striolated Rock-Bunting was obtained by Bury in Yemen, and there is another example from the Abian district in the Aden Protectorate collected by Percival and recorded by Ogilvic-Grant. This record is wrongly referred by Reichenow to F. arabica.

The species ranges from the Soudan to western India. Whether any distinction can be drawn between the birds of India and those of the Anglo-Egyptian Soudan is uncertain, as there are no examples in the British Museum from the Soudan proper, but examples from Somaliland are certainly darker than those from India and have been separated by Sharpe under the name of Fringillaria saturation.

On the whole the two examples from Arabia and one in the Butler Collection from Erkowit in the mountains behind Port Soudan, seem to be closer to those from Somaliland than to those from India; but until it is possible to examine examples from nearer the type-locality of Lichtenstein's original species, I prefer to use the name F. striolata for the Arabian form.

Fringillaria arabica.

Fringillaria arabica Lorenz & Hellmayr, Orn. Monatsb. x. April 1902, p. 55: Yeshbum, Arabia.

Fringillaria dthalæ O.-Grant, Bull. B. O. C. xii. June 1902, p. 80: Dthala, Arabia.

Lorenz & Hellmayr, 1901, p. 235; 1907, p. 109, pl. fig. 1. a. d. Menakha, 7000 ft. 27. xii. 12.

b-f. 2 ♂, 3 ♀. Wasil, 4900 ft. 21–24. ii. 13.

g. ♀. Sok-al-Khamis, 7000 ft. 18. vii. 13.

The Arabian Rock-Bunting is very close to the Socotran one, and only differs from it in having a longer tail and a more speekly white crown. It was described by Lorenz & Hellmayr and also by Ogilvie-Grant from examples collected by Bury, but Lorenz & Hellmayr's description has two months' undoubted priority.

Calandrella brachydactyla brachydactyla.

Alauda brachydactyla Leisler, Ann. Wetterau Ges. iii. 1814, p. 357: S. France.

a. d. Hodeida (sea-level). 6. x. 13.

Dr. Hartert, who has been good enough to examine this Short-toed Lark for me, is satisfied that it is the typical form, and believes that it is a migrant or winter visitor to southern Arabia.

Mirafra cantillans.

Mirafra cantillans Blyth, Journ. As. Soc. xiii. 1844, p. 960: Madras.

Barnes, 1893, p. 84; Grant, 1900, p. 248.

u-d. 2 ♂, 2 ♀. Hajeilah, 2080 ft. 11. iii. 13 to 3. iv. 18.

" ?. Upper mandible black, lower grey, iris brown, feet pale horny brown."

The Singing Bush-Lark has a wide distribution from Somaliland and Abyssinia eastwards to India. I can detect no distinction between the Abyssinian, Arabian, and Indian examples.

Galerida cristata tardinata.

Galerida cristata tardinata Hartert, Vög. pal. Fauna, i. 1904, p. 235: W. Hadramaut, S. Arabia.

Yerbury, 86, p. 18, 96, p. 29; Barnes, 93, p. 83; O.-Grant, 1900, p. 247; Lorenz & Hellmayr, 1901, p. 236, 1907, p. 109.

a-h, $5 \ 3 \ 9$. Menakha, 7000-7500 ft. 18. xii. 12 to 29. i. 13.

i. d. Sok-al-Khamis, 8000 ft. 11. viii. 13.

j. d. Sanaa, 7600 ft. 4. xi. 13.

Dr. Hartert has also examined these examples of the Crested Lark and identifies them with his subspecies described from Hadramaut.

Ammomanes deserti saturata.

Ammomanes saturatus O.-Grant, Nov. Zool. vii. 1900, p. 249; N. of Lahej, S. Arabia.

Lorenz & Hellmayr, 1901, p. 236, 1907, p. 109.

a-d. 3 ♂, 1 ♀. Sanaa, 7600 ft. 9. ix. 13.

"J. Iris sepia-brown, upper mandible blackish, lower pale brown, feet horny brown."

The Yemen examples of the Desert-Lark are lighter-coloured and more sandy than those from the Amiri district also obtained by Bury; the type from Lahej is somewhat intermediate, but all are distinctly darker and mere isabelline than the true A. deserti. It is probable that the colour of the soil has a good deal to do with the variation in plumage in Larks and other ground-living birds.

Motacilla alba.

Motacilla alba Linnæus, Syst. Nat. 1758, p. 185: Sweden. Yerbury, 86, p. 17, 96, p. 25; Barnes, 93, p. 78; O.-Grant, 1900, p. 250; Lorenz & Hellmayr, 1901, p. 236, 1907, p. 110.

a-c. 2 ♂, 1 ♀. Menakha, 7000–7500 ft. 27. xii. 12 to 21, i. 13.

d. ♀. Hajeilah, 2080 ft. 13. iii. 13.

Motacilla flava.

Motacilla flava Linnæns, Syst. Nat. 1758, p. 185: Sweden.

O.-Grant, 1900, p. 250; Lorenz & Hellmayr, 1907, p. 110.

 $a, b. \ 3 \ ?.$ Hajeilah. 2080 ft.
 7-12. iv. 13.

 $c-d. \ 2 \ 3 \ . \ 2 \ ?.$ Sanaa, 7600 ft.
 3-16. ix. 13.

Motacilla boarula melanope.

Motacilla melanope Pallas, Reise Prov. Russ. Reichs, iii. 1776, p. 696: Dauria.

O.-Grant, 1900, p. 250.

a-c. 2 ♂, 1 ♀. Menakha, 7000–7500 ft. 26. xii. 12 to 8. i. 13.

Anthus campestris.

Alauda campestris Linnæus, Syst. Nat. 1758, p. 166: Sweden.

Lorenz & Hellmayr, 1901, p. 236, 1907, p. 110.

a. 9. Sanaa, 7600 ft. 8. ix. 13.

The Tawny Pipit was not included in Mr. O.-Grant's list, but was obtained from Arabia by Hemprich & Ehrenberg as recorded by Rüppell and Henglin.

Anthus trivialis.

Alanda trivialis Linnaeus, Syst. Nat. 1758, p. 169: Sweden.

O.-Grant, 1900, p. 250.

a. d. Sanaa, 7600 ft. 15. ix. 13.

b. 9. Hodeida (sea-level). 13. x. 13.

Anthus rufulus cinnamomeus.

Anthus cinnamomeus Rüppell, Neue Wirbelth. 1835, p. 103: Samieu, Abyssinia.

a. ♀. Hajeilah, 2080 ft. 13. iii. 13.
 b. ♂. Sok-al-Khamis, 8000 ft. 7. viii. 13.

c-*y*. 5 ♂. Sanaa, 7600 ft. 3-17. ix. 13.

This Pipit does not appear to have been previously noticed in southern Arabia. It has a wide distribution throughout eastern and north-eastern Africa however, while the Indian Pipit (A. r. rufulus), which only differs in its slightly smaller size, is found in India. The Yemen examples match those from east and north-east Africa, and the wings average 86 mm.

Anthus leucophrys captus.

Anthus leucophrys captus Hartert, Vög. pal. Fauna, i. 1905, p. 269: Palestine.

a-j. 6 δ , 4 \circ . Menakha, 7000–8500 ft. 24. xii. 12 to 1. ii. 13.

k. ♂. Wasil, 4000 ft. 26. ii. 13. l. ♀. Hajeilah, 2080 ft. 3. iv. 13.

m-o. ♂, ♀, o. Sok-al-Khamis, 7000 ft. 18-19. vii. 13.

" ?. Upper mandible dark slate, lower paler with a purplish tinge, feet buff. Stomach contained remains of small orthoptera."

This Pipit ranges, according to Hartert, from Palestine to the Indus valley. It has never previously been recorded from southern Arabia, but there is a considerable series in the British Museum obtained some years back by Bury from various localities in the Amiri district throughout the year, fairly proving that the species is a resident at any rate in southern Arabia. It differs from A. l. sordidus, the form found in north-eastern and eastern Africa, in its much paler coloration below, while the back always shows traces of the striping which is quite absent in the adult A. l. sordidus.

Cinnyris oseus.

Cinnyris osea Bonaparte, Comptes Rend. Acad. vol. 42, 1856, p. 765: near Jericho.

O.-Grant, 1900, p. 251; Lorenz & Hellmayr, 1901, p. 238, 1907, p. 112.

a-h. 5 $\ensuremath{\mathcal{d}}$, 3 $\ensuremath{\mathcal{Q}}$. Menakha, 6000–7500 ft. 21. xii. 12 to 21. i. 13.

i, j. 2 d. Wasil, 4000 ft. 22-25. ii. 13.

k, l. 2 9. Hajeilah, 2080 ft. 17. iii. to 7. iv. 13.

m. 3. Sok-al-Khamis, 7000 ft. 19. vii. 13.

These birds, as well as a series previously obtained by Bury in the Amiri district, are all quite similar to those from Palestine in the British Museum. They appear to breed in January, as a male from Menakha, dated 14. i. 13, is stated to have had the testes much enlarged.

Cinnyris habessinicus hellmayri.

Cinnyris habessinica hellmayri Neumann, Orn. Monatsb. xii. 1904, p. 29: S. Arabia.

O.-Grant, 1900, p. 250; Lorenz & Hellmayr, 1901, p. 238, 1907, p. 111.

a. ♂. Menakha, 6000 ft.
 b-d. 2 ♂, ♀. Hajeilah, 2080 ft.
 21. xii. 12.
 15. iii. 13.

e. 3 juv. Sok-al-Khamis, 7000 ft. 19. vii. 13.

This Sunbird when previously obtained by Percival and Bury was considered by O.-Grant and Lorenz & Hellmayr to be identical with the Abyssinian bird. It is, however, separable from the typical form, as was pointed out by Neumann, by the more restricted red chest-band, which is slightly more carmine and less scarlet in shade and also more spotted with blue metallic feathers. The crown of the head appears to me to have a more violet and less coppery sheen in the Arabian than in the Abyssinian bird. This is the reverse of what is stated by Neumann. I am not able to detect any difference in the yellow of the breast-tufts, which are said by Neumann to be paler.

The young male from Sok-al-Khamis is similar to the female above, but the metallic feathers are just commencing to show on the crown and nape; below, the throat and chest are already clothed with the metallic feathers, the red is just showing on the chest-band, and the feathers of the abdomen are still edged with hoary white.

A note on one of the males from Menakha reads: "plentiful at this altitude (i. e. 6000 ft.), but local, chiefly on flowering bushes in valleys, does not range as high as the lesser Nectarinia."

In size the Arabian and African birds seem hardly to differ, the average length of the wing being 70 mm. in the former, and perhaps a trifle shorter (68 mm.) in the latter.

Zosterops abyssinica arabs.

Zosterops arabs Lorenz u. Hellmayr, Orn. Monatsb. ix. 1901, p. 31: Yeshbum, S. Arabia.

Lorenz & Hellmayr, 1901, p. 236, 1907, p. 11, pl. fig. 2; O.-Grant, Ibis, 1901, p. 529.

a-h. 4 \circlearrowleft , 3 \circlearrowleft , 1 \circ . Menakha, 6000–7500 ft. 21. xii. 12 to 30. i. 13.

i-k. 3, 2 \, 2. Wasil, 4000 ft. 19. ii. 13 to 4. iii. 13.

"Male. Iris yellowish brown, bill dark horny brown, fect pale horny; in a female the lower mandible seems a little paler." Male: length in flesh 110 mm., wing 57, tail 42, culmen 9.0, tarsus 17.0.

The Arabian White-eye is very close to that of north-east Africa, but the brown wash on the breast and flanks is distinctly of a darker shade and the yellow of the throat is perhaps slightly paler; the size appears to be the same, six Arabian males averaging 57 and six African also 57. I cannot see that the chin is white, as stated by Lorenz & Hellmayr.

There are four other examples in the British Museum previously obtained by Bury as follows:—3, Gerba, December; 2, Hamiah, August; 2 & 0, Dthala, March and February.

Lanius minor.

Lanius minor Gmelin, Syst. Nat. i. 1788, p. 308: Italy. Lanius yemenensis O.-Grant, Bull. B. O. C. xxxiii. 1914, p. 91.

a. ♀. Sanaa, 7600 ft. 3. ix. 13. b, c. ♂ imm. ,, ,, 6-8. ix. 13.

These Shrikes, which Mr. O.-Grant believed to be a new species, appear to me after careful examination and comparison to be immature examples of the Lesser Grey Shrike. This species can be at once distinguished from all other Shrikes by the shortened outer primary. There is another still younger bird in the British Museum, collected by Bury at Ichaf, in the Amiri district of southern Arabia, on October 4. This is so young that it appears probable that

it was bred there. In this case the Lesser Grey Shrike might well be a resident in southern Arabia.

Lanius buryi.

Lanius buryi Lorenz & Hellmayr, Orn, Monatsb. ix. 1901, p. 39: Yeshbum, S. Arabia.

Lanius arabicus O.-Grant, Bull. B. O. C. xv. 1905, p. 78: Amiri distr., S. Arabia.

Lorenz & Hellmayr, 1901, p. 238, 1907, p. 112.

a. ♀. Wasil. 20. ii. 13.

b. ♀. Sanaa, 7600 ft. 8. ix. 13.

These Shrikes are quite similar to the type of L. arabicus, and to a large series of other examples obtained previously by Bury. There can also be no hesitation in identifying L. arabicus with L. buryi. The bird from Sanaa is in immature dress, and has the tips of the secondaries and coverts washed with pale brown; the back also shows traces of pale brown feathers, and the lower side is sooty not bluish grey, the chin and throat being almost white. It is undoubtedly a resident.

Phoneus niloticus.

Enneoctorus niloticus Bonaparte, Rev. Zool. 1853, p. 439: White Nile.

Lanius rufus auet.

a. ♀. Hajeilah, 2080 ft. 11. iii. 13.

b-e. д, 3 д imm. Sanaa, 7600 ft. 5-17. ix. 13.

The Eastern Woodchat Shrike was obtained many years ago by Hemprich and Ehrenberg at Kunfuda, on the Red Sea Coast, but does not appear to have been met with since in Arabia. Whether it breeds in southern Arabia is uncertain, but eggs have been taken by Zarudny in Arabistan and southern Persia, and it certainly winters in north-east Africa, if it does not breed there.

Fiscus nubicus.

Lanius nubicus Lichtenstein, Verz. Doubl. 1823, p. 47: Nubia.

Yerbury, 86, p. 16, 96, p. 21; O.-Grant, 1900, p. 251; Lorenz & Hellmayr, 1901, p. 239, 1907, p. 113.

a-d. 3 ♂, 1 ♀. Hajeilah, 2080 ft. 10–14. iii. 13.

e. d. Sanaa, 7600 ft. 16. ix. 13.

The Masked Shrike may winter in southern Arabia, but is probably only a transient on migration between Persia and Asia Minor and north-east Africa.

Enneoctonus collurio.

Lanius collurio, Linnæus, Syst. Nat. 1758, p. 94: Sweden. Yerbury, 1896, p. 21: O.-Grant, 1900, p. 252.

a. ♂. Hajeilah, 2080 ft. 11. iv. 13.

b, c. ♀, ♂ imm. Sanaa, 7600 ft. 13-15. ix. 13.

The Red-backed Shrike is probably only a passage migrant through southern Arabia.

Otomela phænicuroides.

Otomela phænicuroides Schalow, J. f. O. 1875, p. 148: Turkestan.

O.-Grant, 1900, p. 252.

a, b. ♂♀. Hajeilah, 2080 ft. 18. iii. & 7. iv. 13.

"Bill slate, feet dark vandyke-brown."

Tschagra percivali.

Telephonus percivali O.-Grant, Bull. B. O. C. x. 1900, p. 50: N. of Lahej, S. Arabia.

O.-Grant, 1900, p. 251.

a-c. 2 &, 1 \cdot . Wasil, 4000 ft. 20–28. ii. 13.

d. d. Hajeilah, 2080 ft. 10. iii. 13.

In addition to the type-specimen, there are four other examples in the British Museum obtained by Bury in the Amiri district of southern Arabia. The species is doubtless a resident.

Agrobates familiaris.

Sylvia familiaris Ménétries, Cat. rais. Canc. 1832, p. 32 : Kur, in the Caucasus.

O.-Grant, 1900, p. 253.

a-e. 2 3, 2 \(\gamma\). Sanaa, 7600 ft. 6-9. ix. 13.

Previously obtained in southern Arabia (Aug. to Oct.) by Bury.

Acrocephalus palustris.

Sylvia palustris Bechstein, Orn. Taschenb. 1803, p. 166: Germany.

a. ♂. Hajeilah, 2080 ft. 11. iv. 13.

The Marsh-Warbler has not been previously recorded from southern Arabia, though it breeds as far east as Persia and winters in tropical Africa. There is, however, an example in the British Museum, collected by Mr. Bury in the Amiri district of southern Arabia in October some years ago. It is probably a transient visitor on migration.

Cisticola cisticola aridula.

Cisticola aridula Witherby, Bull. B. O. C. xi. 1900, p. 13: White Nile S. of Khartoum.

Yerbury, 1896, p. 25; O.-Grant, 1900, p. 255.

"Length in flesh, 3 108 to 112, 2 106 mm. Iris pale clay-brown; bill dark brown, lower mandible slightly paler; feet reddish brown."

These examples are quite similar to those obtained by Messrs. Percival and Dodson at Lahej, and also to those in the British Museum from Abyssinia and the Sondan. There is no trace of the reddish-brown band on the basal side of the subterminal black band of the outer tail-feathers. I am inclined to identify the Arabian form with Witherby's C. aridula, always remembering that the type of Witherby's species is an abnormally pale and washed-out example.

Hippolais languida.

Carruca languida Hemprich & Ehrenberg, Symb. Phys. 1833, ff. cc.: Syria.

O.-Grant, 1900, p. 254.

a. ♀. Hajeilah, 2080 ft. 4. iv. 13.

"Length in flesh 156 mm.; bill, upper mandible blackish, lower paler brown; legs greyish brown."

This species breeds from Syria to Turkestan and Afghanistan, and also at Fao on the Persian Gulf, where Mr. W. D. Cuming took a nest in August. It has

been obtained in southern Arabia in April, August, and September, and possibly breeds there also. It is said to winter in British East Africa.

Hippolais pallida.

Carruca pallida Hemprich & Ehrenberg, Symb. Phys. 1833, ff. bb.: Egypt and Nubia.

O.-Grant, 1900, p. 254

a. d. Hajeilah, 2800. 17. iii. 13.

b-d. 2 &,10. Sanaa, 7600 ft. 3-4. ix. 13.

This Warbler, which breeds from Turkey to Turkestan and Syria, appears to pass through southern Arabia on migration, and to winter in Africa from Egypt to British East Africa.

Sylvia communis.

Sylvia communis Latham, Gen. Suppl. i. 1787, p. 287: England.

O.-Grant, 1900, p. 252; Lorenz & Hellmayr, 1901, p. 239, 1907, p. 113.

a. ♀. Hajeilah, 2080 ft. 5. iv. 13.

b. d. Sanaa, 7600 ft. 10.ix. 13.

The Whitethroat had previously been obtained by Bury in southern Arabia in September.

Sylvia communis icterops.

Sylvia icterops Ménétries, Cat. rais. Cauc. 1832, p. 34 : Talysch.

a. d. Sanaa, 7600 ft. 5. ix. 13.

This single example seems referable to the eastern form of the Whitethroat recognized by Hartert. The back is duskier and more greyish in tone, the rufous of the secondaries is paler, and the crown much darker, almost black in fact, as compared with the typical European Whitethroat. It matches very well a Whitethroat in the British Museum, from the Elburz Mountains, obtained by Woosnam on 1 May, 1907, and certainly seems distinct enough to be recognized.

Sylvia carruca.

Motacilla carruca Linnæus, Syst. Nat. 1758, p. 184: Sweden.

u, b. ♂♀. Hajeilah, 2080 ft. 12. iii. & 11. iv. 13.

Though the Lesser Whitethroat has not been previously recorded from southern Arabia, there is another example, also obtained by Bury, in the British Museum labelled "Gerba, Amiri distr. S. Arabia—11 October." It no doubt passes through Arabia on its way to its winter quarters in north-east Africa.

Sylvia blanfordi.

Sylvia blanfordi Scebohm, Proc. Zool. Soc. 1878, p. 979 : Rairo, Abyssinia.

O.-Grant, 1900, p. 253.

a ♂. Wasil, 4000 ft. 3.iii.13.

There is a good series of this species from various localities in southern Arabia in the British Museum taken throughout the year, so we may presume it is a resident. It occurs also on the opposite coast of Africa in the Soudan, Abyssinia, and Somaliland.

Sylvia atricapilla.

Motacilla atricapilla Linnæus, Syst. Nat. 1758, p. 187: Sweden.

O.-Grant, 1900, p. 252.

a-c. ♂, 2 ♀. Hajeilah, 2080 ft. 1-16. iv. 13.

One example obtained by Bury in Shaik Othman in September had been previously recorded from Arabia.

Phylloscopus trochilus.

Motacilla trochilus Linnæus, Syst. Nat. 1758, p. 188: England (Hartert).

O.-Grant, 1900, p. 253.

a. ♀. Hajeilah, 2890 ft. 8. iv. 13.

Messrs, Percival and Dodson procured the Willow-Warbler in September. It probably passes through Arabia on migration only. It winters throughout Africa as far south as Cape Colony.

Phylloscopus collybita abietinus.

Sylvia abietina Nilsson, Kgl. Vet.-Akad. Handl. 1819, p. 115: Sweden.

a. 3. Menakha, 7000 ft. 28. xii. 12.

The Chiffehaff does not appear to have been previously recorded from Arabia, though noticed by Messrs. Forbes & O.-Grant in Socotra, and common in winter in eastern and north-east Africa. The example is rather a large one (wing 62 mm.), and may perhaps be referred to the eastern subspecies if it can be maintained.

Scotocerca inquieta buryi.

Scotocerca buryi O.-Grant, Bull. B.O. C. xiii. 1902, p. 22: Amiri dist., S. Arabia.

a-c. 2 ♂, 1 ♀. Menakha, 7000 ft. 9. i. 13 to 1. ii. 13. d. o. Sok-al-Khamis, 7300 ft. 23. 7. 13.

Bury's Scrub-Warbler has been known up till now only from the single type, and the present series is most valuable as confirming the distinctness of this form at any rate as a subspecies. From the typical S. inquieta, the type-locality of which appears to be central Arabia, it is easily distinguished by its darker and richer coloration, especially below, and by the very distinct brown stripes on the chest; the lastnamed character also distinguishes it from the form found in Baluchistan, in which these stripes, if present, are pale and insignificant. This form, as pointed out by Hartert, should be known as S. i. striata, while Nicol's S. i. innesi appears to be indistinguishable from the typical form from Palestine. The July example is slightly paler and more worn-looking than the other birds, but not otherwise different.

The male of February 1 had thistle-down in its beak, and was nesting in the crevices of the stone-faced terraces.

The male of January 9 is marked "bill brown, iris pale yellow, feet very pale brownish; length in the flesh 115 mm."

The measurements of the male are: wing 49, tail 50, tarsus 21, culmen 9 mm. The female is identical in size and markings.

Prinia gracilis yemenensis.

Prinia gracilis yemenensis Hartert, Vög. pal. Faun. i. 1909, p. 609: Scheik Osman, Aden Protect.

Yerbury, 96, p. 25; Hawker, 98, p. 375; O.-Grant, 1900, p. 255.

a-e. 33, 19, 10. Menakha, 7000 to 7500 ft. 19. xii. 12 to 23, i. 13.

f. ♀. Wasil. 18. ii. 13.

 i, j, β ? . Sanaa, 7600 ft. 5-11. ix. 13.

The Arabian form of this species is distinguished by Hartert from that of Palestine and Egypt. I cannot see the distinguishing character of the broader black spots on the tail-feathers laid stress on by Hartert, but the general tone of the upper parts is somewhat greyer, and the edges of the wing-feathers appear to me to have a stronger wash of chestnut-brown in the Arabian subspecies, which is much closer to the Egyptian and Syrian P. g. delta than to P. q. gracilis of Nubia, which is much paler than either.

The bird appears to be common and a resident in southern Arabia, and the breeding bird has a black bill, the lower mandible in winter being quite pale.

This Grass-Warbler apparently breeds very early, as a male killed January 14 is marked "testes much enlarged."

Turdus atrigularis.

Turdus atroqularis, Temm. Man. d'Orn. 2nd ed. i. 1820, p. 169: Austria and Silesia.

Lorenz & Hellmayr, 1901, p. 240, 1907, p. 113.

a. 9. Menakha, 7000 ft. 24. xii. 12.

"Bill-upper mandible dark slate, lower yellow-ochre; gape yellow. Length in flesh 245 mm. Note like the 'yaffle' of a Woodpecker."

This species, breeding in western Siberia and wintering in central Asia and northern India, has only once been previously obtained in Arabia. This was also a female taken

by Bury at Yeshbum on January 4, and is recorded by Lorenz and Hellmayr. It is not known to visit Africa.

Turdus menachensis.

Turdus menachensis O.-Grant, Bull. B. O. C. xxxi. 1913, p. 86: Menakha, Yemen.

a. b. 3 \cong . Menakha, 7000 ft. 28. xii. 12, 3. i. 13. [Types.]

c. 2. Menakha. 28. i. 13.

d, e. ♂♀. Wasil. 17. ii. 13 & 5. iii. 13.

"Iris pale brown, bill and feet chrome-yellow, toes and orbital ring umber-brown; testes black. Length in flesh of type 270 mm."

"This Thrush may be found along the coffee gardens and scarped terraces of Menakha. He is a crafty customer, flicking across a narrow terrace to dive to one below, and finally sulking among the coffee."

A good series of five examples of this interesting Thrush was procured. Its most distinctive character is undoubtedly the length of the tail, while the dark streaks on the chest and the bright reddish rust-colour of the axillaries also help to distinguish it from any other form, as is pointed out by Mr. Ogilvie-Grant in his original description.

The following are the measurements in millimetres:-

		Wing.	Tail.
3	type	125	123
8		125	118
2	type	115	110
9		115	105
2		115	106

Monticola solitarius solitarius.

Turdus solitarius Linn. Syst. Nat. 1758, p. 170: Italy. Monticola cyanus auct.

Yerbury, 86, p. 16, 96, p. 22; Barnes, 93, p. 74; O.-Grant, 1900, p. 254; Lorenz & Hellmayr, 1901, p. 239, 1907, p. 113.

a-d. 3 3, 1 \cong . Menakha, 7500 ft. Dec.-Febr.

e. 9. Wasil, 4000 ft. Febr.

"Iris dark brown, bill and feet black."

The Blue Rock-Thrush appears to be common in winter in southern Arabia, it is noted as being so by both Barnes and Yerbury. The southern Arabian examples appear to be referable to the typical form formerly known as *M. cyanus*.

Monticola rufocinerea.

Saxicola rufocinerea Rüppell, N. Wirbelth. 1835, p. 76, pl. 27: Samien, Abyssinia.

a, b. 3. Menakha, 7000 ft. Dec., Jan.

c-e. 2 3, 1 \cong . Wasil, 4000 ft. Feb. f. 3. Sanaa, 7600 ft. Sept.

This species was known previously only from Africa, and is found from Abyssinia southwards to Lake Naivasha.

In addition to the examples recorded above there are two specimens in the British Museum from Ichaf and Zabed, in the Amiri district of southern Arabia, collected in July and October respectively, also by Bury. It appears therefore to be a resident.

Accentor fagani. (Pl. V. fig. 2.)

Accentor fugani O.-Grant, Bull. B. O. C. xxxi. 1913, p. 88: Yemen.

a, b. $\Im \ ?$. Menakha, 7000 ft. 1. ii. 13 & 20. i. 13. [Types of the species.]

c-e. ♂, 2 ♀. Menakha. 25-29. i. 13.

"Occurs among the bushes and boulders along the main road coast-wise from the town."

This bird scems to be quite distinct. It differs from A. fulvescens, which seems to be its nearest ally, in the absence of a defined malar stripe, the whole chin and throat being finely spotted. The buffy tinge of the lower side is spread over the lower breast and flanks, and does not form a defined chest-band; the whole of the lower parts, too, are marked with distinct brown stripes.

Phænicurus phænicurus phænicurus.

Motacilla phænicurus Linmens, Syst. Nat. 1758, p. 187: Sweden.

- a, b. & & . Menakha, 7000 ft. 27. xii. 12, 30. i. 13.
 - c. d. Wasil, 4000 ft. 27. ii. 13.
 - d. 9. Hajeilah, 2080 ft. 15. ii. 13.
 - e. J. Hodeida, sea-level. 7. x. 13.

The last specimen in the list is freshly moulted, and the black throat and rufous breast almost obscured by the white tips to the feathers, which wear off later. The Redstart does not appear to have been previously recorded from Arabia, though wintering in Africa.

Phænicurus phænicurus mesoleucus.

Sylvia mesoleuca Hemprich & Ehrenberg, Symb. Phys. 1832, ff. ee.: Djedda (=Jiddah).

a-c. ♂, 2 ♀. Menakha, 6000 to 8000 ft. 21. xii. 12 & 13-16. i. 13.

- d. 3. Hajeilah, 2080 ft. 15. iii. 13.
- e. d. Hodeida, sea-level. 7. x. 13.

This Redstart seems to winter in southern Arabia together with the Common Redstart. It was first described from Jiddah, but does not seem to have been recorded since from Arabia. It breeding-range is southern Russia, Asia Minor, and Persia.

Luscinia luscinia.

Motacilla luscinia Linnæus, Syst. Nat. 1758, p. 184: Sweden.

Luscinia philomela auct.

a. d. Hodeida, sea-level. 7. x. 13.

The single example of the Sprosser obtained at Hodeida is an interesting bird. It differs from all the other examples in the Museum collection in the shade of brown of the back, which is of a more slaty and less rufous tinge. It is also much whiter below; the throat, the lower breast, abdomen, and under tail- and under wing-coverts being pure white without any wash of rufous which is so marked a feature of

all the other examples of the Sprosser in the collection of the Museum.

As far as the dimensions are concerned and the proportionate length of the primaries, it resembles the Sprosser.

The Sprosser has not hitherto been recorded from southern Arabia, though there are examples from Fao in the Persian Gulf and from British East Africa in the British Museum.

I hesitate to describe this bird as a new form, as there is only one example, and the material for comparison in the Museum is very scanty. It is obviously a very freshly-moulted example, and to this its peculiarities are very likely due.

Luscinia golzii.

Lusciola golzii Cabanis, Journ. Orn. 1873, p. 79: Turkestan.

O.-Grant, 1900, p. 255.

a. ♀. Hajeilah, 2080 ft. 5. iv. 13.

b. d. Sanaa, 7600 ft. 3. ix. 13.

"Length in flesh, 3 191, 9 187 mm.; 9. Bill and feet black; 9. Loaded with fat. Stomach contained remains of insects."

The Persian Nightingale had already been obtained by Bury in the Amiri district in September. Its winter quarters had been previously unknown.

Cercotrichas melanoptera.

Sphenura erythroptera var. melanoptera Hemprich & Ehrenberg, Symb. Phys. 1832, ff. dd.: Arabia.

Yerbury, 86, p. 16, 96, p. 23; Barnes, 93, p. 75; O.-Grant, 1900, p. 256.

a-c. 1 ♂, 2 ♀. Hajeilah, 2080 ft. 15–27. iii. 13.

This species appears to be confined to southern Arabia, where it is probably a resident. There is a good series in the British Museum from Lahej. Yerbury found a nest in April at Shaik Othman. It is distinguished from the African species by the absence of the chestnut wing-lining, though curiously enough there are two examples, one in the present collection, indistinguishable from the African bird.

Cercotrichas podobe.

Turdus podobe S. Müller, Linn. Syst. Nat., Suppl. 1776, p. 145: Senegal (ex Buffou).

a. 9. Hajeilah, 2080 ft. 11. iii. 13.

This example, though taken at Hajeilah at the same time as those which are undoubtedly the true Arabian species, seems to be referable to the north-east African form, having a very distinct chestnut lining to the wing. There is another female example in the British Museum, taken by Messrs. Percival & Dodson at Al Khawr, Abian, S. Arabia, 2. x. 99, which is exactly similar.

Irania gutturalis.

Cossypha gutturalis Guérin, Rev. Zool. 1843, p. 162: Abyssinia.

a. d. Sanaa, 7600 ft. Sept.

This bird had been previously collected by Bury in southern Arabia in the Amiri district, in July, September, and October, though it has not been recorded in literature.

There are several examples of a very pale-breasted form in the Museum collection, notably two obtained by Woosnam near Ardall (9500 ft.) in north-west Persia in April, one at Kaisarich in Asia Minor in May by Danford, and another at Somadu, in Somali-land, by Pease in March; but it seems impossible to regard this as more than a colour-variation.

Nearly all the examples from Asia Minor and Persia were collected in the early months of the year—March to May, and so are those from north-eastern Africa, while those from southern Arabia have been taken in July, September, and October. Whether this indicates any migration towards southern Arabia during the second half of the year must remain doubtful till more information is obtained.

Saxicola rubicola maura.

Motacilla maura Pallas, Reise Russ. Reichs ii. 1773, p. 708: Urals and W. Siberia.

a-k. 7 ♂, 4 ♀. Menakha, 7000–8000 ft. 20. xii. 12 to 28. i. 13.

l-n. 1 ♂, 2 ♀. Hajeilah, 2080 ft. iii. 13.

o. 3. Sanaa, 7600 ft. 16. ix. 13.

The Eastern Stone-chat, though said by Hartert and Reichenow to winter in southern Arabia, does not appear to have been met with by Yerbury or Barnes near Aden, and is not mentioned in Ogilvic-Grant's (1900) list.

Cercomela melanura.

Saxicola melanura Temminek, Pl. Col. iii. 43rd livr. 1824, no. 257, fig. 2: Arabia.

Yerbury, 85, p. 17, 96, p. 24, pl. 1. fig. 2; Barnes, 93, p. 77; O.-Grant, 1900, p. 256; Lorenz & Hellmayr, 1931, p. 241, 1907, p. 114.

a, b. ♂♀. Wasil, 4000 ft. ii. & iii. 13.

"Bill and feet black."

A common resident in southern Arabia, found throughout the year and breeding at Aden.

Enanthe isabellina.

Saxicola isabellina Cretzschmar, Atlas zu Rüpp. R., Vögel, 1826, p. 52: Nubia.

Yerbury, 96, p. 24; O.-Grant, 1900, p. 255.

a. d. Hajeilah. 18.iii.13.

b, c. 3 9. Sanaa. ix. 13.

d. d. Hodeida. 7.x.13.

This widely-spread Chat is apparently a winter visitor to southern Arabia between the months of September and March.

Enanthe cenanthe.

Motacilla wnanthe Linnæus, Syst. Nat. 1758, p. 186: Sweden.

Barnes, 93, p. 76; Yerbury, 96, p. 24; O.-Grant, 1900, p. 255.

a, b. ♂ [♀?]. Sanaa, 7600 ft. ix. 13.

The Wheatear is common in southern Arabia in winter.

Enanthe yemenensis.

Enanthe yemenensis O.-Grant, Bull. B. O. C. xxxi. 1913, p. 87: Yemen.

a. 3. Menakha, 7000 ft. 25. i. 13. [Type of the species.]

b-f. & & imm. Sanaa, 7600 ft. Sept.

"Though fairly common, is difficult to approach. It frequents open ground, usually perching on an irrigation bank or a clod of loam in a bit of bare fallow."

This fine Stone-chat, described by Mr. O.-Grant, is closely allied to Œ. bottæ of Abyssinia and to Œ. isabellina. From the former it differs in its slightly paler colour, both above and below, and also in possessing a very distinct white streak behind the eye hardly indicated in Œ. bottæ. From Œ. isabellina it can be distinguished by its distinctly stouter bill, the more ashy and less ochraceous tone of the back, and by the contrast between the dark crown and the lighter back, which, however, is not so evident in the freshly-moulted September male from Sanaa as in the type. The black on the outer tail-feathers is also more extensive in Œnanthe bottæ, measuring about 35 mm. against about 25 mm. in Œ. isabellina.

The most distinct character of the species, however, is certainly the white streak behind the eye.

A male of the year, killed September 3 at Sanaa, has traces of the juvenile spotting on the crown and back, which are quite alike in colour; the secondaries are broadly edged with tawny, and there is tracing of freekling on the underside.

The following are the measurements in millimetres:-

	Length in				
	flesh.	Wing.	Tail.	Culmen.	Tarsus.
d type	180	102	65	16	34
ð imm. 3. ix. 13		103	69	16	32
3 adt. 17 ix. 13	_	103	69	16	34
Q. 13.ix.13	_	98	61	17	30
& S. bottæ		103	65	16	31

Enanthe leucomela.

Motacilla leucomela Pallas, N. Comm. Petrop. xlv. pt. 1, 1770, p. 584: Samara, Russia.

Saxicola pleschanka auct.

Barnes, 93, p. 76; O.-Grant, 1900, 256; Lorenz & Hellmayr, 1901, p. 241, 1907, p. 114.

a. ♀. Menakha, 7500 ft. 23. xii. 12.

b, c. ♂♀. Hajeilah, 2080 ft. iii. & iv. 13. d, e. ♂♀. Sanaa, 7600 ft. ix. 13.

This species has been met with by Barnes and also by Bury on a previous occasion in the Abian country in September and October. It is probably only a bird of passage in southern Arabia.

Enanthe lugentoides.

Saxicola lugentoides Seebohm, Cat. Bds. B. M. v. 1881, p. 371 : Sennaar.

O.-Grant, 1900, p. 256; Lorentz & Hellmayr, 1901, p. 214, 1907, p. 114.

a-e. 3 ♂, 2 ♀. Menakha, 7200 ft. xii. 12. & i. 13.

Wasil, 4000 ft. 25. ii. 13.

Hajeilah, 2080 ft. 14. iii. 13.

"Bill, iris, and feet black. Difficult to approach."

In addition to the above there is a considerable series of this rare Chat obtained by Bury in various localities in southern Arabia between the months of August and January. The only other example in the Natural History Museum is one of those collected by M. Botta in Sennaar in 1839, and mentioned by Seebohm in the original description.

It seems probable that the bird breeds in Arabia and is a resident.

Argya squamiceps yemensis.

Argya squamiceps yemensis Neumann, Orn. Monatsb. xii. 1904, p. 29: between Shaik Othman and Lahej, Aden Protectorate.

Yerbury, 96, p. 16, 96, p. 23; Barnes, 93, p. 75; Matschie, J. Ornith. 1893, p. 112; Sharpe, Ibis, 1895, p. 384; Hawker, 98, p. 375; Grant, 1900, p. 256.

a, b. ♂♀. Hajeilah, 2080 ft. 28. iii.; 9. iv. 13.

c. \(\text{\colored} \). Sanaa, 7600 ft. 4. ix. 13.

The resident Babbler of southern Arabia is undoubtedly

darker than that of Palestine, and is separable as a subspecies on those grounds, as pointed out by Neumann. The type-locality of Argya s. squamiceps Cretzsch. is Akaba, far to the north on the borders of Palestine. There is a large series of the southern A. s. yemensis in the British Museum from the neighbourhood of Aden as well as from Museat. It appears to be a common species.

Pycnonotus xanthopygos.

Ixus xanthopygos Hemprich & Ehrenberg, Symb. Phys. 1828, ff. bb.: Syria.

Pycnonotus reichenowi Lorenz & Hellmayr, Orn. Monatsb. ix. 1901, p. 30: S. Arabia.

Barnes, 93, p. 75; Yerbury, 96, p. 23; Hawker, 98, p. 375; O.-Grant, 1900, p. 257; id. Ibis, 1901, p. 521; Lorenz & Hellmayr, 1901, p. 241, 1907, p. 114.

a-c. 2 ♂, 1 ♀. Menakha, 6000–7000 ft. 9–15. i. 13. *d.* ♀. Wasil, 4000 ft. 26. ii. 13. *e, f.* 1♀, 1♂ imm. Sok-al-Khamis, 7000 ft. 12. vii. 13.

I have very earefully compared these and other examples from southern Arabia in the British Museum with examples from Palestine, and I am quite unable to detect any difference between the two series. Lorenz & Hellmayr state that the southern Arabian birds are much smaller than those from Palestine, but I find that the wings of the males average 97 mm. and the females 91 mm. in both northern and southern birds, nor can I confirm any of the other distinctions pointed out by Lorenz & Hellmayr for their *P. reichenowi*.

Alseonax gambagæ.

Alsconax yambugæ Alexander, Bull. B. O. C. xii. 1901, p. 11: Gambaga, Gold Coast Hinterland.

Muscicapa somaliensis Bannerman, Bull. B. O. C. xxv. 1909, p. 20: Waghar, Somaliland.

a, b. d, d imm. Sanaa, 7600 ft. 3. ix. 13.

"Iris brown, upper mandible black, lower pale brown, legs black."

I am satisfied that the two Flycatchers obtained by Bury

at Sanaa are identical with those previously collected by him in Somaliland and described by Bannerman, and also with Alexander's Gold Coast bird; the types of both these species are in the British Museum, and agree very well with the Yemen bird. Alexander collected two additional examples of this species at Dumtar in the Shari country during his expedition from the Niger to the Nile in 1904–7. One of these is a young bird and exactly matches the one collected by Bury at Sanaa. They are conspicuously spotted with white above, while the underparts are streaked with brown, especially on the breast, and the wing- and tail-feathers edged with paler brown.

The following are the dimensions in millimetres:-

	Wing.	Tail.
Yemen, &	75	64
Waghar, &	73	64
,, ♀	73	62
Gambaga, &	73	60
Dumtar, 3		56

Muscicapa grisola.

Muscicapa grisola Linnæus, Syst. Nat. 12th ed. 1766, p. 328: France.

Barnes, 93, p. 74; O.-Grant, 1900, p. 257. a. 3. Hodeida [sea-level]. 8. x. 13.

Parisoma buryi.

Parisoma buryi O.-Grant, Bull. B. O. C. xxxi. 1913, p. 87: Yemen.

a. Sex? Menakha, 7000 ft. 6. i. 13. [Type of the species.]

This species, represented only by a single example, seems most closely allied to *P. jacksoni* of Mt. Elgon, but it is distinctly larger, the wing of the former measuring 70 mm. against 65 in the latter. The Elgon bird is also much paler below and has less rufous on the flanks and belly. Altogether the Yemen bird is a very distinct form.

Tchitrea viridis.

Muscicapa viridis P. L. S. Müller, Linn. Syst. Nat., Suppl. 1776, p. 171: Senegal.

Terpsiphone cristata auct.

Yerbury, 86, p. 16, 96, p. 22; Barnes, 93, p. 72; O.-Grant, 1900, p. 257.

a-f. 3 β, 3 ♀. Wasil, 4000 ft. 15. ii. 13 to 4. iii. 15.

"For startling plumage nothing can surpass the Paradise Flycatcher, denizen of mid-altitude, where he ranges among the coffee in deep ravines. He begins life (after he is fledged) as a brisk young spark, all bright rusous chestnut, with a head of shot-silk tipped with a jaunty crest 'just like mother.' Next year he will throw out unexpected splashes of white along his wings, as the breeding-season approaches, and the two central shafts of his tail grow longer and larger. These two long tail-shafts are much prized by natives, who consider it a gift for a prince. Therefore the adult white plumage is always accompanied by extreme shyness and timidity. He haunts secluded and densely wooded ravines, guarded by giant precipices, ready always to flicker through the gloomy bush like a streak of white satin at the first alarm, or dive for settling down a thousand feet or so to the next belt of jungle."

Two of the males have long tails; in the third the middle tail-feathers are beginning to grow; all are in the red-backed and red-tailed stage, and show no signs of the white stage supposed to be the completed male plumage. The bird has a wide distribution throughout north-east and western Africa.

Cryptolopha umbrovirens yemenensis.

Cryptolopha umbrovirens yemenensis O.-Grant, Bull. B. O. C. xxxi. 1913, p. 90: Yemen.

a, b. ♂♀. Menakha, 8000 ft. 20. xii. 12 & 28. i. 13. [Types.]

c-e. 2 ♂, ♀. Wasil, 4000 ft. 15-25. ii. 13.

Found among the leafless walnut-groves below Menakha."

This species was compared by Mr. O.-Grant with C. umbrovirens from northern Abyssinia, but the only examples of this form in the British Museum are now identified with C. u. erythreæ, and there are no examples of the typical C. umbrovirens from central Abyssinia in the collection. However, the present subspecies from the Yemen seems to be quite distinct, and can be at once recognized by its much paler underparts—almost white on the chin and belly, and by its white lores. The upper parts, too, are paler and of a more olivaceous shade of brown as compared with those of C. u. erythreæ.

The three additional examples from Wasil agree with the types in every way.

Riparia riparia.

Hirundo riparia Linnæus, Syst. Nat. 1758, p. 192: Sweden.

O.-Grant, 1900, p. 287.

a. 9. Sanaa, 7600 ft. 11. ix. 13.

The Egyptian Sand-Martin is considered by Hartert to form a distinct subspecies (R. r. littoralis), but the Yemen bird seems to be on the whole referable to the typical form.

Riparia obsoleta.

Cotyle obsoleta Cabanis, Mus. Hein. i. 1850, p. 50: Northeast Africa.

Yerbury, 86, p. 14, 96, p. 22; Barnes, 93, p. 69; O.-Grant, 1900 p. 257; Lorenz & Hellmayr, 1901, p. 242, 1907, p. 115.

a. 9. Menakha, 7500 ft. 27. xii. 12.

A Crag-Martin from southern Arabia is distinguished by Reichenow (Vög. Afr. iii. 1905, p. 828) as R. arabica, and is compared with R. fuligula of north-eastern Africa. Whether this is a distinct form or not I am unable to say, but the bird from Menakha as well as others from Aden and Socotra in the British Museum closely resemble the true R. obsoleta of Egypt and Palestine (if this is the true typical form; the exact type-locality seems uncertain). There is a

certain amount of variation in the general coloration of the upper parts, and birds from the Yemen and Aden districts are certainly darker than those from Egypt, but there is a good deal of variation in this respect, and probably the paler birds come from the more desert localities.

Riparia rupestris.

Hirundo rupestris Scopoli, Annus I. Hist.-Nat. 1769, p. 167: Tyrol.

a. 9. Menakha, 7500 ft. 27. xii. 12.

The Crag-Martin has not hitherto been noticed in southern Arabia. It ranges through southern Europe and northern Africa, and as far east as northern China.

Hirundo rustica.

Hirundo rustica Linnæns, Syst. Nat. 1758, p. 191: Sweden.

Yerbury, 86, p. 14, 96, p. 22; Barnes, 93, p. 68; O.-Grant, 1900, p. 257.

a. d. Hajeilah, 2080 ft. 24. iii. 13.

b, c. ♀. Sanaa, 7600 ft. 16-17. ix. 13.

Hirundo rufula.

Hirundo rufula Temminck, Man. d'Orn. 2nd ed. 1835, iii. p. 298: Egypt.

1. ii. 13.

a. 9. Menakha.

b. 3. Wasil, 4000 ft. 5.iii. 13.

c. 3. Sok-al-Khamis, 7000 ft. 26. vii. 13.

The Red-rumped Swallow has not previously been recorded from southern Arabia, but as it ranges from Morocco to Afghanistan and south to Abyssinia, it is hardly surprising to find it in the Yemen mountains, where it presumably breeds.

Cuculus canorus.

Cuculus canorus Linnæus, Syst. Nat. 1758, p. 110 : Sweden.

Barnes, 93, p. 72; O.-Grant, 1900, p. 258.

a, b. 3 2. Sanaa, 7600 ft. 6. ix. 13.

"Male: bill black, iris orange-yellow, orbital patch pale yellow, feet and eyelid yellow."

Both birds are quite adult, but in worn plumage.

Centropus superciliosus.

Centropus superciliosus Hemprich & Ehrenberg, Symb. Phys. 1828, fl. r.: Arabia.

Yerbury, 86, p. 15, 96, p. 20; Barnes, 93, p. 73; O.-Grant, 1900, p. 253; Lorenz & Hellmayr, 1901, p. 242, 1907, p. 115.

a, b. ♂ ♀. Hajeilah, 2080 ft. 12 & 16. iv. 13.

"Female: iris crimson, bill black, feet greyish black."

"A markedly unfamiliar note is that of the Bush-Cuckoo, a tawny long-tailed bird that flits like a miniature pheasant through the bushes. Its song is like the murmur of a brook, and is only heard in the cool of the morning and when the afternoon sun has spent itself."

Micropus affinis.

Micropus affinis, Gray & Hardwicke, Ill. Ind. Zool. i. 1832, pl. 35. fig. 2: India.

Yerbury, 86, p. 15, 96, p. 18; O.-Grant, 1900, p. 258.

a. d. Hajeilah, 2080 ft. 24. iii. 13.

b. 9. Sanaa, 7600 ft. 10. ix. 13.

"Iris dull brown, bill black, feet vandyke-brown, tarsi paler; after heavy rain."

Merops apiaster.

Merops apiaster Linnaeus, Syst. Nat. 1758, p. 117: S. Europe.

a-c. 2 ♂, ♀ imm. Sanaa, 7600 ft. 4-15. ix. 13.

The Bec-eater had not previously been recorded from southern Arabia, except by Forskål in the 18th century, but there are examples in the British Museum, obtained by Bury some years ago in the Amiri district, on September 9. A note on the ticket of one of these examples is as follows:—"Taken from a flight moving over from the north, which stooped to settle for the night among the trees of El Kubar."

Merops cyanophrys.

Phlothrus cyanophrys Cabanis & Heine, Mus. Hein. ii. 1860, p. 137: Kunfuda, Arabia.

Yerbury, 86, p. 15, 96, p. 19; Barnes, 93, p. 70; Hawker, 98, p. 374; O.-Grant, 1900, p. 259; Lorenz & Hellmayr, 1901, p. 242, 1907, p. 115.

a. 9. Menakha, 6000 ft. 21. xii. 2.

b. 9. Sok-al-Khamis, 7000 ft. 11. vii. 13.

A resident and common species in southern Arabia; *M. muscatensis* Sharpe (Ibis, 1886, p. 165) is hardly to be distinguished except by its rather shorter bill.

Aerops albicollis.

Merops albicollis Vicillot, N. Diet. xiv. 1817, p. 15: Senegal (ex Levaillant).

Barnes, 93, p. 71; Yerbury, 96, p. 19; O.-Grant, 1900, p. 259; Lorenz & Hellmayr, 1901, p. 243, 1907, p. 116.

a, b. 3 ♀. Hajeilah, 2080 ft. 9-14. iv. 13.

"An influx of these birds has occurred since the heavy rain of April 9th."

The Percival-Dodson Expedition obtained several examples north of Lahej in August, and Mr. Bury others in the Amiri district in December and February. It is probably a resident. It has a wide distribution throughout north-east and western Africa.

Upupa epops.

Upupa epops Linnæus, Syst. Nat. 1758, p. 117: Sweden. Yerbury, 86, p. 16, 96, p. 20; Barnes, 93, p. 73; O.-Grant, 1900, p. 259; Lorenz & Hellmayr, 1907, p. 115.

'a. J. Hajeilah, 2080 ft. 12. iii. 13.

Undoubtedly it is the typical race of the Hoopoe which either winters in southern Arabia or passes through on migration. It has also been taken in August, September, and October.

Lophoceros nasutus forskalii.

Buceros (Lophoceros) forskalii Hemprich & Ehrenberg, Symb. Phys. 1828, ff. z, note 8: Kunfuda, Arabia. O.-Grant, 1900, p. 260; Lorenz & Hellmayr, 1901, p. 243, 1907, p. 116.

a, b. ♂♀. Hajeilah, 2030 ft. 25-26.iii. 13.

"At sunrise on Bajil plain you may hear the Hornbills calling vociferously to each other, and approach the queer misshapen bird while absorbed in his weird spasmodic chant."

As has been noticed by Claude Grant (Ibis, 1915, p. 270) there is considerable variation in the dimensions of the North African Grey Hornbill, which ranges from Gambia to southern Arabia. There can be no doubt, however, that the Arabian birds are the largest. I find that the wing averages 250 mm., while those from western Africa average 221; the Soudan birds are intermediate, averaging 231. It seems worth while therefore to keep the Arabian birds distinct.

Forskål described this Hornbill under the name of the "Crotophaga from Arabia," and Hemprich and Ehrenberg met with it subsequently and named it.

Halcyon leucocephala semicærulea.

Alcedo semicærulea Gmelin, Syst. Nat. i. 1788, p. 457 : Yemen.

Barnes, 93, p. 72; Yerbury, 96, p. 20; O.-Grant, 1900, p. 260; Lorenz & Hellmayr, 1901, p. 243, 1907, p. 116.

c. & imm. Sanaa, 7600 ft. 3. ix. 13.

"These birds only appear at Hajeilah after the rains set in."

"In every seelusion, amid tall trees in deep ravines, you may meet that quaint anomaly, the land Kingfisher. The bird's retiring habits belie its startling appearance. Its back and wings are bright metallic blue, barred with black, while a glowing rufous breast, an ashen head, and a big vermilion bill combine to give the bird away to the most casual observer. It feeds on insects and is seldom found near water."

Claude Grant (Ibis, 1915, p. 265) distinguishes the Arabian race from others found in Africa. The type was obtained

by the Danish traveller Forskål in the Yemen in the 18th century, and described in his posthumous 'Descriptiones,' though, as he can hardly be called a binomial author, it is better to date the name from Gmelin.

Coracias abyssinus.

Coracias abyssinus Boddaert, Tabl. Pl. Eul. 1783, pl. 38 : Abyssinia.

Yerbury, 86, p. 15, 96, p. 20; Barnes, 93, p. 72; O.-Grant 1900, p. 260.

a, b. & \(\gamma \). Hajeilah, 2080 ft. 15. iii. & 4. iv. 13.

"Among the denser bush of Hajeilah gayer birds prevail, especially the long-tailed Roller, a symphony in cobalt and azure, shaded delicately with fawn. The male sports a long, finely pointed tail, and spends a great deal of his time with raffish bachelor birds on the field telegraph-wire to Sanaa, while the female stays at home in some pollarded jujube-tree and bites her tapering tail with vexation; that is why all female Rollers of this type have such ragged tails. But the gad-about male is not a bad husband. He will work for hours when locusts are arriving to supply the home-larder, and may often be heard singing a kind of love-song as he cuts somersaults and volplanes to cheer his nesting mate."

These are the first Arabian representatives of the Abyssinian Roller which have reached the British Museum. I have therefore carefully compared them with the series from northern Africa, and have come to the conclusion that no sufficient distinction can be detected to justify the separation of the Arabian bird from that of Abyssinia. The West African Roller, however, has a strong wash of greenish on the crown, and can be well considered a distinct race under the name of *C. abyssinus senegalensis*, as proposed by Reichenow.

Reichenow states that in an example of this species from Arabia examined by him the feathers of the middle of the back were pale blue like the crown and nape. He seems uncertain whether this bird is an accidental variation or represents a distinct race. The birds collected by Bury in

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the Yemen certainly show no sign of this aberration and must be identified with the Abyssinian form.

Melierax metabates.

Melierax metabates Henglin, Ibis, 1861, p. 72: Bahr-el-Abiad [= White Nile].

Melierax polyzonus (nec Lesson), auct.

Barnes, 93, p. 67; Yerbury, 96, p. 15; Hawker, 98, p. 374; O.-Grant, 1900, p. 263.

a, b. ♀ ♂. Hajeilah, 2080 ft. 27. iii. & 10. iv. 13.

Astur sphenurus.

Falco (Nisus) sphenurus Rüppell, N. Wirb. Vög. 1835, p. 42: Dahlak I., nr. Massowalı.

a. ♀. Menakha, 6000 ft. 21. xii. 12.

b. 3. Hajeilah, 2080 ft. 16. iv. 13.

Rüppell's Goshawk is not mentioned in Mr. O.-Grant's list of Arabian birds, though stated by Reichenow as having been obtained by Hemprich & Ehrenberg in Arabia. It has a wide distribution in the northern part of the Ethiopian region from Senegal to Somaliland.

Gypaëtus barbatus grandis.

Gypaëtus grandis Storr, Alpenreise vom Jahre 1781, 1794, p. 69: Switzerland.

а.	3	imm.	Sok-al-K	hamis, 7	400 ft.	14. vii. 13.
b.	3	imm.	"	2.9	,,	19. vii. 13.
c.	3	nearly adt.	, ,,	"	22	26. vii. 13.
d.	P	adt.	,,	,,	33	2. viii. 13.
e.	9	adt.	,,	22	, ,	15. viii. 13.

- b. "Length in flesh 1045 mm., expanse of wings 2186; bill pale brown, cere bluish, iris very pale with blood-red streaks, feet bluish lead, toes darker."
- c. "Length in flesh 1040 mm., expanse of wings 2355; two mammal bones the size of a man's thumb in crop."

Wings measure: "a" 720, "b" 730, "c" 700, "d" 760, "e" 730 mm., respectively.

"The lordly Lämmergeyer likes bones, but has neither the flesh-tearing beak of the Griffon Vulture nor its punishing wing-power. Yet he is a first-class exponent of aviation, and has probably been sailing about for hours watching the Vultures at their prey with fierce red-ringed eyes.

"There is a rush like the wind in tall trees, a gaunt pariah yelps and leaps hastily aside, and the Lämmergeyer is gliding on easy pinions a hundred yards off with a bone in his beak. The bird goes banking steeply up an ascending spiral, to a height of a thousand feet or more, then drops the bone and swoops down after it, a very good second, to earth. If the bone is shattered the bird picks out the marrow, if not, he repeats the performance again and again. If the bone is too light to be thus broken, after several attempts he swallows it whole."

This fine series of Lammergeyers is the first which has been received from southern Arabia. A careful examination of them shows that they must be referred to the European and Asiatie form, rather than to that of Abyssinia, as the cheeks have the characteristic black spotting and the black streak behind the ear is well-marked. On the other hand, the feathering on the tarsus appears to me to stop a little short of the toe-joint, while in the European and Indian bird it usually extends quite to that point, and in the Abyssinian birds there is a larger space of bare tarsus, so that in this respect the Yemen birds appear to be somewhat intermediate.

In size the Yemen bird seems to be smaller than that of Europe and India.

Hartert, in his recently published fasciculus of the 'Vög. pal. Fauna' (p. 1196), restricts the typical G. b. barbatus to the bird from the Atlas mountains, and uses the name given above for the European and Indian forms, which he is unable to separate from one another, and I have followed him in this usage.

Hieraaëtus fasciatus.

Aquila fasciata Vieillot, Mém. Soc. Linn. Paris, ii. pt. 2, 1822, p. 152: Montpellier, France.

a. 9. Wasil. 18. ii. 13.

"Length 645 mm. Iris bright yellow, bill dark slate, pale at base, feet yellow."

Bonelli's Eagle is found in southern Europe and northern Africa from Spain and Moroeco eastwards to China, but has not hitherto been recorded from southern Arabia. The wing of the single specimen (stated to be a female) measures only 455 mm., which is small even for a male. Perhaps the bird is wrongly sexed. The moult is almost completed, only two of the tail-feathers and two of the inner primaries on each wing remaining to be shed.

Milvus ægyptius.

Falco ægyptius Gmelin, Syst. Nat. i. 1788, p. 261: Egypt. Yerbury, 86, p. 14, 96, p. 15; Barnes, 93, p. 67: O.-Grant, 1900, p. 262; Lorenz & Hellmayr, 1901, p. 243, 1907, p. 117.

a. ♂. Menakha, 7000 ft. 26. xii. 12. b, c. ♂ ♀ imm. Sok-al-Khamis, 7400 ft. 29. yii. 13.

d, e. 3 9. Sanaa, 7600 ft. 12. ix. 13.

Only the male from Menakha seems to be fully adult, with a bill bright yellow; specimen "d" has the bill pale brown, though the plumage appears to be the adult one; the other three birds are all in immature dress with black bills.

The Arabian birds seem rather smaller than those from Egypt. The wing of the adult Menakha male only measures 410 mm., while Hartert gives the average dimensions of the Egyptian bird as 430–458, but in other respects the Arabian birds resemble those from Egypt rather than the darker *M. parasitus* of the Ethiopian region proper.

Tinnunculus tinnunculus carbo.

Cerchneis tinnunculus carbo Hartert & Neumann, J. f. Orn. 1907, p. 592: nr. Harrar, Abyssinia.

Yerbury, 86, p. 13, 96, p. 16; Barnes, 93, p. 65; O.-Grant, 1900, p. 262.

a. d imm. Menakha, 7000 ft. 27. xii. 12.
b. d. Sanaa, 7600 ft. 8. ix. 13.

The Kestrel of southern Arabia appears to be referable to the African subspecies, distinguished by its rather darker colouring and the more developed spots on the lower surface. The wing of the adult male measures 230 mm.

Scopus umbretta bannermani.

Scopus umbretta bannermani O.-Grant, Bull. B. O. C. xxxv. 1914, p. 27: Mt. Legenisho, Bt. E. Africa.

Yerbury, 86, p. 22, 96, p. 38; Barnes, 93, p. 174; O.-Grant, 1900, p. 265.

a. 3. Hajeilah, 2080 ft. 27. iii. 13.

The Hammerkop of Arabia must be referred to the larger form spread all over east and south Africa. The wing of the present example measures 305 mm.

Bubulcus ibis.

Ardea ibis Linnæus, Syst. Nat. 1758, p. 144: Egypt. Bubulcus lucidus auet.

Yerbury, 96, p. 27; O.-Grant, 1900, p. 266.

a. 3. Hajeilah, 2080 ft. 15. iii. 13.

Totanus ochropus.

Tringa ocrophus Linnæus, Syst. Nat. 1758, p. 149: Sweden.

Yerbury, 86, p. 21, 96, p. 35; Barnes, 93, p. 172; O.-Grant, 1900, p. 269.

a. 9. Sanaa, 7600 ft. 4. ix. 13.

Totanus hypoleucus.

Tringa hypoleucos Linnæus, Syst. Nat. 1758, p. 149: Sweden.

Yerbury, 86, p. 21, 96, p. 35; Barnes, 93, p. 171; O.-Grant, 1900, p. 269; Lorenz & Hellmayr, 1907, p. 119. a. \(\mathbf{q} \). Sanaa, 7600 ft. 5. ix. 13.

Totanus glareola.

Tringa glareola Linnæus, Syst. Nat. 1758, p. 149: Sweden.

O.-Grant, 1900, p. 268.

u. d. Sanaa, 7600 ft. 10. ix. 13.

The Common, Green, and Wood-Sandpipers all appear to pass through Yemen as well as the Aden Protectorate on migration.

Gallinago media.

Scolopax media Latham, Gen. Synops. Suppl. i. 1787, p. 292: England.

a. d. Sanaa, 7600 ft. 5. ix. 13.

The Great Snipe does not appear to have been previously recorded from Arabia. It probably only passes through on migration. It is possible that the Snipe shot by Barnes and Yerbury should have been referred to this species. They are recorded as the Common Snipe.

Phalaropus lobatus.

Tringa lobata Linnæus, Syst. Nat. 1758, p. 148: Hudson Bay.

a. 9. Sanaa, 7600 ft. 6. ix. 13.

"Bill black, feet ashy black."

It is very remarkable to find the Red-necked Phalarope occurring at Sanaa at an elevation of over 7000 ft. According to Blanford its principal winter abode in the eastern hemisphere is on the coasts of Arabia, Baluchistan, and Sind, but I have not found a previous record of its occurrence in south-western Arabia. Possibly its migration route runs along the mountain-range. The single example is without any trace of the red patches on the throat, and is in winter plumage.

Glareola pratincola limbata.

Glareola limbata Rüppell, Syst. Ucbers. 1845, p. 113, pl. 43: Djetta (=Jiddah), Arabia.

a-c. ∂ juv., 2 ♀ juv. Sanaa, 7600 ft. 13. ix. 13.

All three of these examples are quite young birds, with the brown backs mottled with white and white below with a dusky band across the chest.

There can be no doubt that there are several distinct subspecies of *G. pratincola*, but it is impossible with only young birds to state with certainty to which race these should be referred. There is a young bird in the British Museum which matches the Sanaa birds very well. It is labelled Djetta, and is said to be a co-type of Rüppell's *G. limbata*.

I have therefore referred the Sanaa birds to this form. The Pratincole is not mentioned in Ogilvie-Grant's list.

Vinago waalia.

Columba waalia Gmelin, Bruce's Reisen Afr. 1791, p. 31: nr. Lake Tsana, Abyssinia.

Yerbury, 86, p. 18, 96, p. 29; O.-Grant, 1900, p. 271; Lorenz & Hellmayr, 1901, p. 244, 1907, p. 119.

a, b. ♂♀. Hajeilah, 2080 ft. 26. iii. 13.

"Male, length in flesh 334 mm.; iris pink, bill whitish, cere dull pink, feet ochre-yellow, claws pale grey; erop full of the fruit of the jujubier."

"Before leaving the mid-altitudes we must not forget the Green Pigeon, which ranges no higher, and is common in the foot-hills when the wild figs are ripe. His tints harmonize so perfectly with his surroundings, that you may mark a flight down into a tree and fail to detect their actual presence, till they leave like a tornado on the side your gun does not command."

There seem to be no appreciable distinction between these birds and those from Abyssinia, whence came the type of the species.

Columba livia intermedia.

Columba intermedia Strickland, Ann. Mag. N. H. xiii. 1844, p. 39: India.

Barnes, 93, p. 165; Yerbury, 96, p. 29; O.-Grant, 1900, p. 271; Lorenz & Hellmayr, 1901, p. 244, 1907, p. 120.

a, b. 3 \cong . Menakha, 7500 ft. 1 & 27. i. 13.

c. d. Hajeilah, 2080 ft. 27. iii. 13.

"The Rock-Pigeon harries the crops, and may be seen in early morning along the mountain-road looking for spilled grain. It is a confirmed freebooter, and has its home on inaccessible ledges or in hidden eaves.

"On the Sanaa plain, pigeons come from a great distance to raid the crops, and may be seen flying straight and high at sunrise on their marauding quest. Some get so gorged that they shirk the return flight, and shelter from the heat of the day in deep wells."

The Arabian Rock-Dove is very close to the Indian form, with the grey rump the same colour as the back. It is also very similar to the Egyptian bird, which has been called *Columba schimperi*. But, as has been recently shown by Mr. Stuart Baker, the Rock-Dove is so often kept in a state of domestication or semi-domestication and the true wild birds so often cross with the domesticated ones, that it is most difficult to arrange the forms into distinct geographical races, and Mr. Baker himself is in favour of treating all the grey-rumped Rock-Doves from Tunis to China as one race. If this is the correct view the Yemen Rock-Doves must certainly be called *C. livia intermedia*.

Streptopelia senegalensis.

Columba senegalensis Linnæus, Syst. Nat. 12th ed. i. 1766, p. 285: Senegal.

Yerbury, 86, p. 19, 96, p. 30; Barnes, 93, p. 165; O.-Grant, 1900, p. 271; Lorenz & Hellmayr, 1901, p. 244, 1907, p. 120.

u, b. ♂♀. Menakha, 7000 ft. 26. xii. 12.

"Male: Iris yellow; bill black; legs carmine."

Streptopelia semitorquata.

Columba semitorquata Rüppell, N. Wirbelth. 1835, p. 66: Taranta mts., Abyssinia.

Barnes, 93, p. 165; Yerbury, 96, p. 30 (*Turtur risorius*); O.-Grant, 1900, p. 272.

a. d. Wazil. 15.ii.13.

Pterocles lichtensteini arabicus.

Pterocles lichtensteini arabicus Neumann, Orn. Monatsb. 1909, p. 152: Lahadj, S. Arabia.

Yerbury, 86, p. 19, 96, p. 31; Barnes, 93, p. 166; O.-Grant, 1900, p. 272; Lorenz & Hellmayr, 1907, p. 120.

u. ♀. Hajeilah, 2080 ft. 5. iv. 13.

"Bill black, orbital patch sulphur, feet yellow."

The Arabian examples of Lichtenstein's Sand-Grouse are undoubtedly paler than those from Nubia and north-east Africa, and seem worthy of subspecific distinction, as has been pointed out by Neumann and Claude Grant.

Caccabis melanocephalus.

Perdix melanocephala Rüppell, N. Wirbelth. 1835, p. 11, pl. 5: Djetta (= Jiddah), Arabia.

Nicholson, P. Z. S. 1851, p. 128, pl. Aves, xl.; Yerbury, 86, p. 19, 96, p. 31; Barnes, 93, p. 166; O.-Grant, 1900, p. 272; Lorenz & Hellmayr, 1901, p. 245, 1907, p. 121.

a, b. & chicks. Sok-al-Khamis, 7000 ft. 4. viii. 13.

"Iris brown, bill black, feet reddish brown; hatched under a hen."

"The game-bird of the upper heights is the big Blackheaded Chikore, and a very difficult bird he is to bag. To begin with, he is disgracefully persecuted by anyone who has a weapon of precision, and what Yemen Arab has not? He prefers therefore to pick a scanty living among lonely kopies where cultivation is not, or roam about the black breasts of mountain-giants, where food is even searcer. In this latter case the covey (usually three brace or so) will leave its home among the boulders of some sheltered ravine, and file up stealthily at dark to feed on lofty terraced fields of barley."

The Arabian Red-legged Partridge is figured very well by Rüppell, and also by Dr. Nicholson of the East India Company's service, who obtained it some twenty miles inland from Mokha, and named it Francolinus yemensis. The figure drawn by Wolf is quite inaccurate, and was probably prepared from a description or from a rough sketch by Dr. Nicholson. The species is confined to south-west Arabia.

The chicks sent home by Mr. Bury are yellowish brown above, speekled with a few white and black markings on the lower back; below, the chin and throat are white, the breast pale brown, some of the feathers with white central streaks, the rest of the lower parts pale slaty.

Numida ptilorhyncha ptilorhyncha.

Numida ptilorhyncha Lesson, Traité, 1831, p. 498: Mareb river, Abyssinia (C. Grant).

a. ♂. Hajeilah, 2080 ft. 10. iv. 13.

"Bill: upper mandible dark brown, lower and tip of

upper paler, wattles blue, casque and tuft very pale brown; throat black; feet black."

"It is among the foot-hills and the adjacent plains that Guinea-fowl occur—they never range up to mid-altitude (4000 ft.).

"These birds may be seen any morning in summer feeding in large flocks out on the open fallow, well out of shot from any cover. They scatter about like farmyard hens, picking up stray corn and tasty insects, but if one turns to approach them in a gradual or unostentatious manner, they edge persistently away, and to 'gallop' them on an active pony is but to test their marvellous powers of sprinting."

No Guinea-fowl has previously been brought home from southern Arabia. The present example appears, so far as it is possible to form a conclusion from a single isolated specimen, to be referable to the typical Abyssinian race, N. p. ptilorhyncha, characterised by Mr. Claude Grant (Ibis, 1915, p. 26), who has made a careful study of all the races of the Tufted Guinea-fowl. The range of this race extends from Suakim to northern Abyssinia, and now, if I am correct in my conclusions, across the Red Sea to the highlands of Yemen. It is characterised by its well-feathered neck and large wattles.

In the ignorance which still prevails regarding many details of the breeding-habits of the Cuckoo, we have a good object lesson of how well Nature is able to guard her secrets, since, after years of careful and methodical investigation by distinguished naturalists, comparatively few authentic facts have been established.

XI.—Some Reflections on the Breeding-habits of the Cuckoo (Cuculus canorus). By Major R. F. Meiklejohn*, D.S.O., Royal Warwickshire Regiment, M.B.O.U.

^{*} Major Meiklejohn was wounded and taken prisoner during the retreat from Mons, and was in Germany till quite recently. He sends us this paper from Switzerland, whither he has now been transferred.